BOYS' AND GIRLS' BOOKSHELF

THE · BOOK · HOUSE ·

A BOOK is just a House of Thought,
Where many Things and People live.
Beyond its doors Great Things are taught,
And all its Dwellers give and give.
So walk right through the open door
With kindly Heart and brain awake.
You'll find in there a Wonder Store
Of Good Things, all for you to take.

The Dwellers in *your* Book House know
All sorts of tales to tell to you,
And each will try his best to show
The way those tales of Wonder grew.
For this our Book House Friends expect
A trifling payment in return;
Just thoughtful Kindness and Respect,—
That's all they *ask* for all we *learn*.

John Martin

This BOOK belongs to

THE BOOK TREE

A BOOK TREE is a Knowledge Tree,
As almost anyone can see.
Long, long ago its seed was sown;
For *years* and *years* the Tree has grown.
Ten thousand thousand Hearts & Heads
Have cared for it, so now it spreads
Its Roots and Branches far and wide,
And casts its shade on every side.

This Tree bears Fruit of different kinds
For many Hearts and many Minds.
So all you Children have to do
Is just to take what's *best* for you.
But no one ever soils or breaks
The Golden Fruit he *needs* and takes,
And no one ever bends or tears
The Books this Tree of Knowledge bears.

"John-martin"

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SHUFFLING THROUGH THE LEAVES.

DRAWN BY E. BENSON KNIPE.

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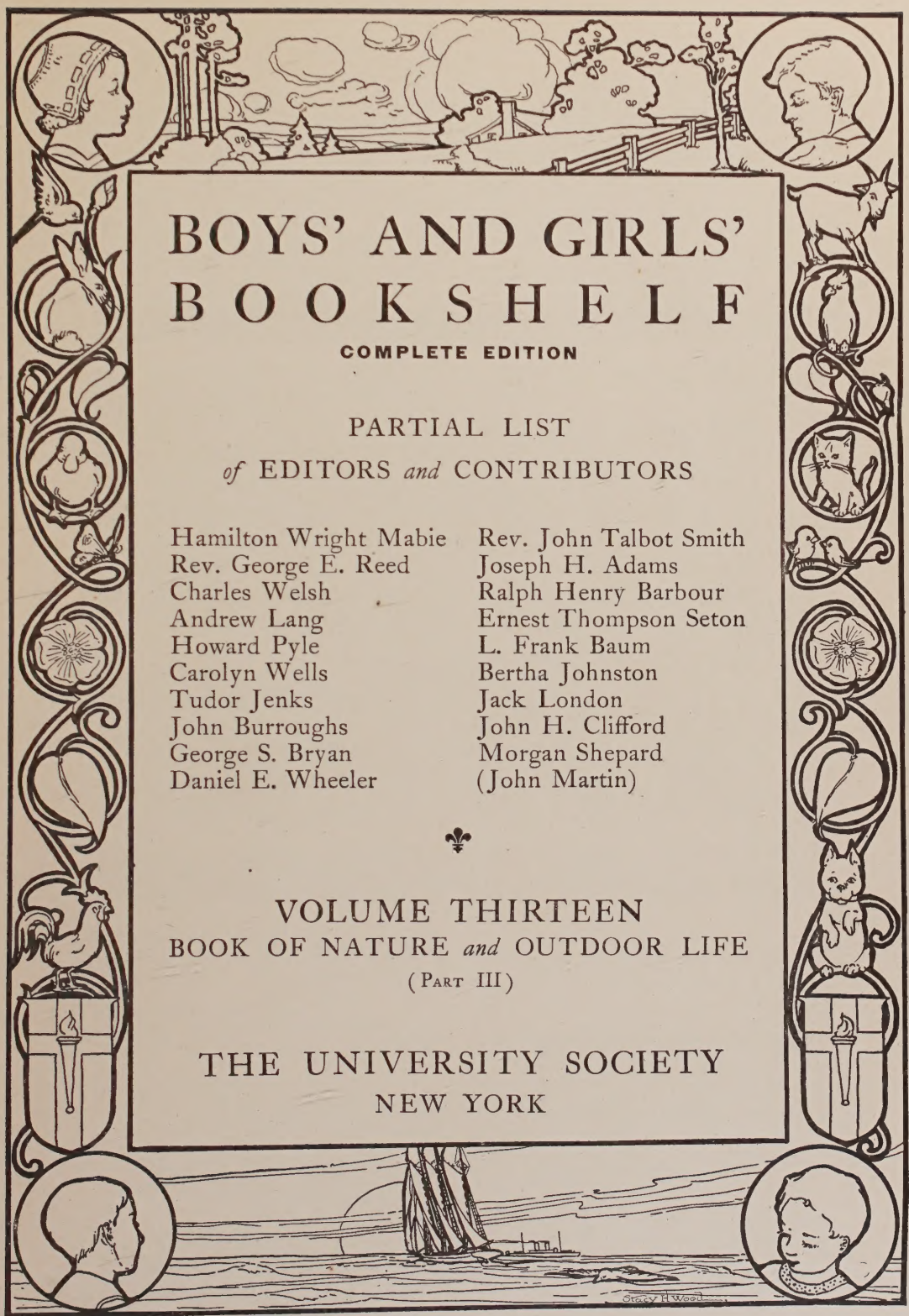

BOYS' AND GIRLS' BOOKSHELF

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VOLUME THIRTEEN
BOOK OF NATURE *and* OUTDOOR LIFE
(PART III)

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BIRD TALKS

PART II

The Ancient Mariner (in the poem of that name by Coleridge) admitted that with his crossbow he shot an albatross. His mates then claimed that good luck had abandoned the ship, for he had killed the bird "that made the breeze to blow." The ship was becalmed for many days, and there was intense suffering for lack of water to drink. Then the shipmates hung the dead albatross around his neck as a token of his disgrace.

THE ALBATROSS

The albatross, that wanderer of the seas, so often referred to in prose and poem, is nevertheless a stranger to the average person, and by some is even considered a myth. In Coleridge's "The Rime of the Ancient Mariner" the albatross plays a leading part, and one sorrows for the poor bird which, after following the ship for weeks, is pitilessly shot down by a mariner.

The albatross is the largest sea-bird having the power of flight, and is closely allied to the gull, petrel, and Mother Carey's chicken. It has a tremendous stretch of wing, averaging from ten to twelve feet. The wings are, however, extremely narrow, being about nine inches in breadth. The body is about four feet in length, and the weight is from fifteen to eighteen pounds, a comparatively light weight when one considers the extreme length of wing. The albatross is possessed of a peculiarly long, oddly shaped bill, which gives it a strange appearance; this is shown in the illustration. The nostrils open from round, horizontal tubes on each side of the bill, but at its base.

AN ALBATROSS.
Notice the nostril tube extending about a third of the way down.

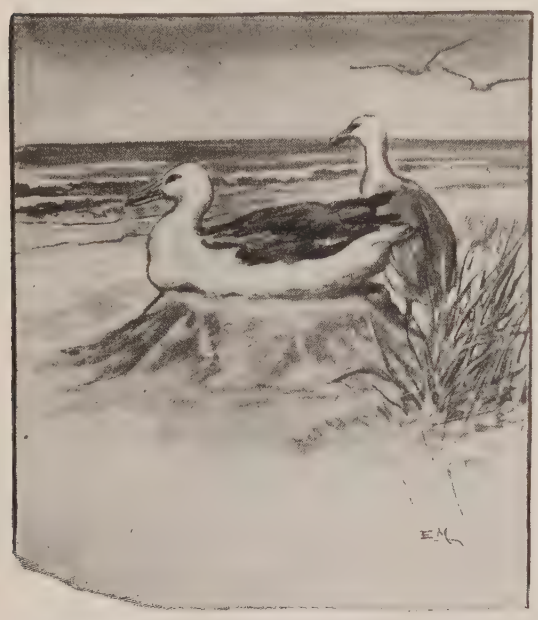
This great bird is generally met with in Southern seas, although it is occasionally seen on our Pacific coast. On the Atlantic side it is rarely found as far north as Tampa Bay.

Its food consists of cuttlefish, jellyfish, and scraps thrown from passing ships. It is a greedy bird, and at times gorges itself to such an extent that it is unable to rise from the water.

Its power of flight is, however, the most remarkable thing about the albatross. It spends its life, with the exception of the few weeks given each year to nesting, entirely at sea, and is on the wing practically all the time. Furthermore, it does not progress by flapping its wings as most birds do, but seems to soar at will, rarely, if ever, giving a stroke of the wing, seeming to need no impetus. Buller gives an excellent description of this power:

"On tireless wings hour after hour, day after day, they wheel round and round and forever round the ship—now far behind, now sweeping past in a long, rapid survey like a perfect skater on an uneven field of ice. There is no effort; watch as closely as you will, you rarely or never see a stroke of the mighty pinion. The flight is generally near the water, often close to it. You lose sight of the bird as he disappears in the hollow between the waves, and catch him again as he rises over the crest; but how he rises and whence the propelling force is inexplicable; he merely alters the angle at which the wings are inclined. Usually they are parallel to the water

and horizontal; but when he turns to ascend or makes a change in his direction, the wings then



"THE ALBATROSS NESTS ARE BUILT ON THE GROUND IN AN OPEN SITUATION. THEY ARE MOUND-LIKE IN APPEARANCE AND HAVE A SLIGHT DEPRESSION ON THE TOP."

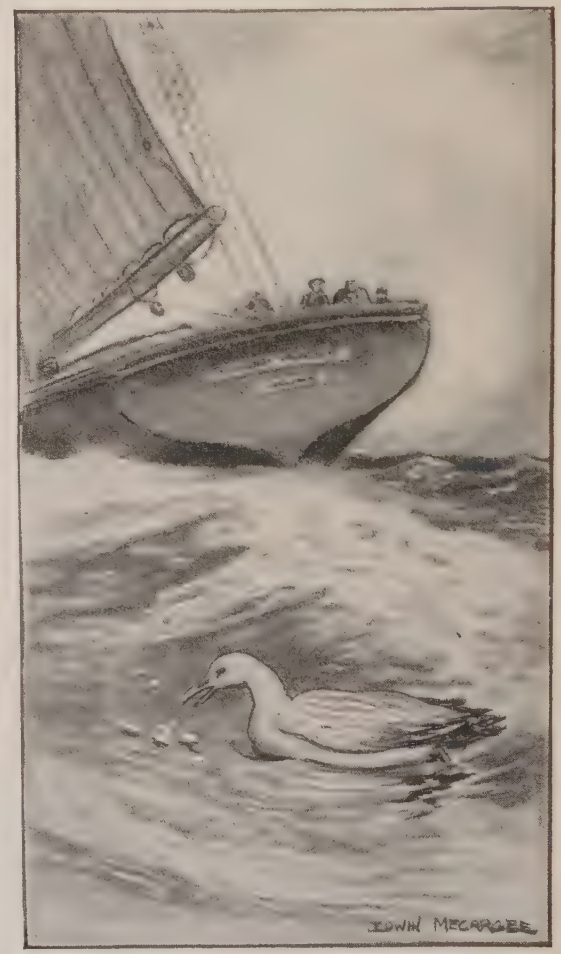
point at an angle, one to the sky, the other to the water."

At nesting-time, which is early in the year, the albatross repairs to some isolated island such as the Crozet Islands in the southern Indian Ocean, or Tristan da Cunha, in the South Atlantic Ocean. Here they congregate in thousands, building their nests and hatching and rearing their young. The nests are built on the ground in an open situation. They are mound-like in appearance and have a slight depression on the top. They are made of mud and grass and are about eighteen inches in height. The albatross lays but one egg, which is quite large, being from four to five inches in length. The shell is rough, creamy white in color, and speckled with numerous brownish spots. When disturbed on the nest they clatter their bills, making a very loud noise, which, when taken up, by thousands of birds, becomes deafening.

There are eighteen known species of albatross, the best known being the wandering albatross. The adult bird of this species is white, and on the back bands of undulating dark stripes run from neck to tail. The wing-quills are black. Very similar to this bird is the royal albatross of New Zealand. The best known of the other varieties are the black-footed and the Laysan albatross.

Sailors are very superstitious concerning this bird and are especially averse to killing one of them. Unfortunately, this aversion is not general, and passengers on vessels, taking advantage of the bird's fearlessness, often fish for it with line and baited hook. By this means many are captured. To me it seems a needless and atrocious cruelty.

Knowing the albatross, one cannot repress a feeling of awe and of reverence for the Power that has so admirably equipped him, master of



THE ALBATROSS IN THE WAKE OF A VESSEL.

The albatross did follow,
And every day, for food or play,
Came to the mariners' hollo!

COLERIDGE.

the air, rider of the wind. Serene and secure in his matchless power, he cheers the lone wanderer and gives a touch of life to the watery wastes.

S. EDWIN MEGARGEE, JR.

HOW THE BIRDS GOT A DRINK

One evening last summer I got out the hose to give the thirsty garden a drink and, as it turned out, the birds as well. It was after a very warm day, one of the many we had during the long

THE BIRDS DRINKING THE BIG DROPS FROM THE LEAVES.

drought. The ground was like powder, and vegetation, drooping and shriveled from the heat and lack of rain, was plainly in distress.

After wetting down the tomato-plants, the hose was turned on another part of the garden. Up to this time I had not noticed a bird about, in fact had not given them a thought; but now, on turning my attention again to the tomatoes, I saw several sparrows hopping around among the dripping plants. At first I could not understand why these birds had gathered around where I was at work, but upon looking more closely the mystery was soon solved. They were after a drink and knew how to take advantage of the opportunity to get it. Of course the water that fell on the ground soaked in almost immediately and disappeared, but that on the leaves would collect in big drops on all the points, where it would hang, and here was where the birds were getting their drink. It was amusing to see the thirsty little creatures hopping and flitting about among the wet plants, pecking at the great drops, looking for all the world as if they were feeding on some sort of crystal berries. Thinking to help them, I turned the hose their way again; but this seemed to be too much of a good thing, and they quickly flitted out of reach, only to be back as soon as the hose was turned away. How these birds knew what was going on I cannot say, but probably they were in the near-by trees, and when they saw water coming concluded it was for them as well as the plants. The little fellows certainly knew how to get it, even though it was a somewhat unusual way of drinking.

George A. King.

AN ORIGINAL NEST-BUILDER

While watching a phœbe at work on her nest, I discovered that part of the structure was the work of barn-swallows. A closer examination showed that the phœbe was only adding a rim to an old barn-swallows' nest to replace a part which had crumbled away. The nest, as you will see by the illustration, was in the usual site chosen by barn-swallows, but one where a phœbe's mossy house could hardly have been made to stay but for the support now afforded.

This little phœbe stopped in her work when the building was of the ordinary height, showing that she took full advantage of the swallows' work. I have never seen an example of more intelligent nest-building by any bird. In a later visit to the nest I was pleased to see the bird sitting quietly in her curious house; still later the nest seemed fairly "running over" with baby phœbes.

THE NOVEL NEST OF A PHŒBE.

Edmund J. Sawyer.

WINTER BIRD VISITORS

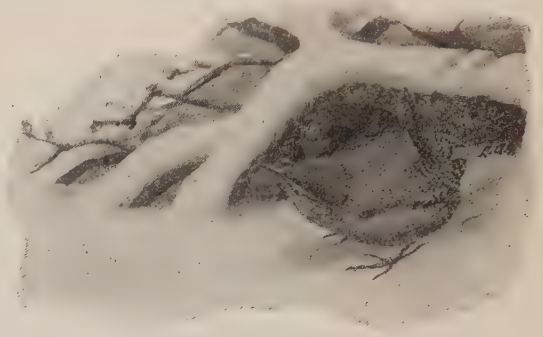
So much has been said and written of our summer bird visitors, their arrival in the spring and their departure in the autumn for the warmer climes of the south, that we may forget that some birds arrive from the north in late autumn or early winter and depart in the spring. To these bird visitors, our cold winters are "warmer climes." The knowledge of this fact, and the observation of these birds gratefully gathering food in the snow or joyously singing in bare branches of trees and shrubs, make even the coldest day seem warmer, brighter, and more cheerful.

It is astonishing to many people that there are birds which thus come to us only to spend the winter, leaving us again at the beginning of spring for northern lands and snow-banked hillsides, where the long day and pale twilight nights

EVENING GROSBEAKS ON A MAPLE BOUGH.

of the arctic reign. Birds that raise their broods in the far, treeless northland, where heather, grasses, and stunted alders grow on a shallow, soaking soil underlaid by a great depth of eternal ice, at the approach of winter gather into great roving flocks to surge southward to the gentler climate of our blizzardy "temperate" winters! Yet all young country folks have seen these restless, wandering flocks of winter-lovers, and occasionally even in the towns and cities there arrive unfamiliar companies of fat, fluffy birds, busily opening the cones of the firs and spruces, or devouring the buds of the maples.

Many of these much-traveled little fellows are wonderfully tame, and seem not to experience fear of man so universal with animals that rear their young in his neighborhood. Pine-grosbeaks and crossbills, whose real homes are in the silent, moss-filled spruce forests of the great North, will almost allow themselves to be caught in your hand! With the field-roving kinds, like the snow-buntings, horned larks, and longspurs, this fearlessness is not found, probably from the constant lookout they are forced to keep against the cunning and hungry white foxes and the daring, trap-jawed little ermine that persistently hunt them in



A WINTER WREN.

their northland home. But the rosy little redpolls, the creepers, kinglets, "little friend chickadee," as the northern Indians call him, and all the other deep forest dwellers, are as unafraid of us as they are of the gentle porcupines and deer of their home woods.

Every few years, especially along the sea-coast and the larger rivers and lakes, there is a wave of those splendid, day-hunting rascals—the snowy owls. They are great fishermen, the only owls to make this sort of hunting a practice, and

A NORTHERN SHRIKE SINGING.

may sometimes be seen sitting, silent and motionless, like a block of ice, at the edge of the open water, waiting for a chance to nab an unsuspecting fish. Of course, this is not a very paying way to get a living, and they also catch field-mice, muskrats, hares, and even large birds like quail or grouse. But there are only two other birds of prey in our country that habitually eat

fish, and one of these seldom catches its own, preferring to eat the dead fish along the shore or pirate it from the real fisherman—the osprey. No doubt some of our readers have seen the white-headed eagle dash after a screaming fish-hawk as he rises from his plunge, a splashing fish struggling in his mighty clutch. The eagle pursues and the osprey eludes him; on and up they go in marvelous swoops and dashes, the eagle striving to get where he can strike from above, bullying the smaller bird until, discouraged, he throws the game desperately from him. By this time the birds have risen to a great height. Now comes a masterpiece of flight. Leaving the defrauded osprey, the eagle turns, and with mighty strokes hurls himself downward like a bolt through space—down—down—and actually overtakes the ever-accelerating fish before it reaches the water! Then in mid-air he catches himself on bending wing, and flies lazily to some dead tree or open beach, the cowardly but victorious owner of another's earnings.

There is a strange little bird, about as big as a robin, which nearly every winter brings us. He is generally alone, like a tiny black and gray hawk in many of his ways, but related truly to the gentle vireos and waxwings. He is the northern shrike, or butcher-bird, and he gets a cruel living by catching mice and little birds, which he hangs on locust thorns, sharp twigs, or the points of a wire fence, as his little feet, unlike the hawk's, are not strong enough to hold his prey.

A SNOWY OWL FISHING.

But he is a handsome fellow, and rarely one may hear a very sweet little song as he sits on the top of some leafless bush, particularly late in the winter. But generally he is silent, like the true birds of prey, or at best gives only a rasping squeal.

Once in a great while in the East, and every winter in the West, a beautiful bird in black, white, and yellow, with an enormous light green bill, makes his appearance—the evening grosbeak. The female is not so bright, being gray and olive, with much black and white in wings and tail. These birds, too, are very tame, and, like their cousins, the rosy pine-grosbeaks, are apt to come into our cities to eat the buds from the maples and elms along our streets. They are so beautiful and rare-looking that they are seldom molested.

Along the country fences and in the briery corners of weedy fields we can generally find a flock of jolly, sweet-tempered little sparrows, very "perky" little birds with red-brown caps and a single dark spot in the middle of the breast. Soft, tinkling calls are continuous in their company; and though nervous and active, the tree-

REDPOLLS IN THE COW-YARD.
Feeding all about a boy lying on the snow.

sparrows are far from shy, and are always cheery, sweet-voiced little fellows. They are frequently joined by the slate-gray juncos, or snow-birds, which can always be told by the flash of white tail-feathers in flight.

A flock of redpolls came into a stableyard one winter to feed on the timothy seed that could be gleaned from the cow's fodder, and noticing their extreme tameness, my friend and I decided to put them to a test. So we lay down on the crusty snow and strewed timothy all about us to see how near they would come to us when we were quite still. They had flown only to the nearby fence at our approach, and the trial succeeded beyond our wildest hopes. Imagine our excitement when the rosy little mites fluttered down to where we lay unconcealed, and at once commenced feeding fearlessly all about us,—finally alighting on our backs, shoulders, and even our hands, busily and musically occupied with their search for food! I think those few moments were the most thrilling that wild live birds ever afforded me. LOUIS AGASSIZ FUERTES.

THE MERRY OUTLAW, BOB O' LINCOLN

The merry bobolink is one of the prettiest song-birds in the country. In Eastern Pennsylvania, along the Delaware, the bobolink is known as the reed-bird, and is eagerly hunted by sportsmen.

You must likewise know that the bobolink has a third name—rice-bird. That is what it is called in the Southern States. It is so named because it attacks the rice-fields and devours the grain. We of the North know little of the trouble it has caused by this especial appetite. The magnitude of the depredations of the little bobolink in past years can hardly be appreciated outside of the narrow belt of rice-fields along the coasts of a few of the Southern States—innumerable hosts visiting the fields at the time of planting in spring, eating the seed-grain before the fields are "flooded," and then flying back north into Pennsylvania, New York, New England, and Canada to spend the summer. About the middle of August is their time for beginning to migrate south again, and swoop down upon the rice-fields once more, just at the time of harvesting the crop. What rice escaped in the spring has little hope of surviving where the bobolinks are most numerous, for as the grain matures the birds pick it off in the face of the most desperate opposition.

To prevent total destruction of the crop during these invasions, thousands of men and boys, called "bird-minders," have been employed each year by the rice-planters; hundreds of thousands of pounds of gunpowder burned, and millions of birds killed. On account of the slaughter, bobolinks—though still a pest in the South—have been greatly reduced in number and have become rare in parts of the Northern States and Canada.

Between spring and late summer, when the bobolink is at the North, he displays none of

THE BOBOLINK.

these ruinous ways of his. He is all beauty and music. Sometimes he may plunder a corn-field a little, but in Pennsylvania he is not guilty even of that slight offense. He is known on the farms of the North only as a bird most showy in his dress of black, white, and yellow feathers. The song of the bobolink is a peculiar, rapid, jingling, indescribable medley of sounds, started first by one bird, quickly followed by another and another, until the whole flock are engaged in a grand concert. Then, suddenly, without any apparent reason, they all, at the same instant, stop. These delightful choral concerts endear them to the farmer boys and girls of the North. The "mellow, metallic chink" the birds utter has given them a name to imitate their song—"bob-o-link." When the birds mate, the male appears to lose his vocal powers, and is heard to utter only a sharp, clinking note, like that of the female. And when they settle down to plundering a rice-field, they seem to have lost all their melody, for then they can only chirp.

Another strange thing about the bobolink is that he loves the darkness of night. They only migrate, or travel, at night. They winter in the West Indies, where they get so fat that the natives have given them a fourth name—the "butter-birds."

Now, you know the habits of this masquerading little warbler. On his spring journey from the West Indies north, he robs the rice-fields of the Carolinas as they are being planted. Then he flies from justice to find a refuge in the North, where he suddenly puts on a quaint, coquetting air of sweetness, and wins the admiration and love of all who come within the sound of his voice. Then, suddenly, he takes on an evil mood, clothes it with darkness, and flies back to the rice-fields, where he spreads desolation all around, and increases the cost of rice in Northern towns and cities.

L. E. Stofiel.

A BIRD'S STOREHOUSE; OR, THE CARPENTER-BIRD

He is a handsome bird, and if there were not so many of his species he would attract a great deal of attention. He has a bright red head, black-and-white body, and a needle-pointed tail. The tail supports him in a perpendicular position on the side of a tree, while he is hammering, or rather chiseling, a hole in its bark.

Now, all woodpeckers, having sharp-pointed beaks and very strong muscles in their necks and heads, can drive a deep hole into the side of a tree or stump; but this California woodpecker is said to surpass them all as a hole-digger; and he not only digs the hole, but he fills it up with a nut or an acorn.

This is the strangest part of his performance; for while a great many other birds have the hole-

digging instinct, there are very few of them that possess the hole-filling instinct. The blue jays and the squirrels have a habit of accumulating supplies in the shape of nuts and acorns, and you may see them, almost any day in autumn, snatching the acorns from twigs and branches. The same instinct prompts this woodpecker to lay in his stores of acorns. Some people say, however, that he never resorts to these supplies again, but just lays them up without a thought as to the future at all. But this is not the way with Nature. She does not work blindly, but always with some wise purpose in view.

THE WOODPECKERS' STOREHOUSE.

At any rate, this bird can drill a hole in the very hardest wood, and at this business he is employed almost all the time. The holes are usually made in rows, at regular distances apart, each about the size of an acorn. He is never discouraged, and never gives up a task, even though it may seem most formidable. He has been known to surround a giant redwood-tree, over twenty feet in circumference, with rings of holes one above another, from the root to the topmost limb, for over two hundred feet. I say "he" did it, but I mean, of course, generation after generation of them, for many, many years.

After he has got the hole or holes to his liking, he flies off to the nearest oak-tree and secures an acorn, which he brings to the storehouse tree and places in the little "safety-deposit" he has made for it. It fits exactly, and so, inserting it sharp end first, he hits it repeatedly with his beak and drives it in to stay till needed.

So long as the woodpecker confines his harvesting to the acorns, no one except the Indians, who frequently store them up for winter food, will have anything to say. But this he does not do. It is said that he likes nuts as well, and a story is told of a family of woodpeckers that completely stripped a small grove of

almond-trees. The owner of the grove thought he must have a good crop, and when the time came to gather it he went to do so, and lo, there was not a nut on any tree!

But one of his boys, in foraging about, found an immense old oak which was partly decayed, and riddled with holes from top to bottom. And in each hole was an almond! So the tree was cut down, and the man secured several bushels of almonds, after all; but the woodpeckers scolded him loudly.

Down in Mexico there lives a similar woodpecker, who stores his nuts and acorns in the hollow stalks of the yuccas and magueys. These hollow stalks are separated by joints into several cavities, and the sagacious bird has somehow found this out, and bores a hole at the upper end of each joint, and another at the lower, through which to extract the acorns when wanted. Then he fills up the stalks solidly, and leaves his stores there until needed, safe from the depredations of any other thievish bird or four-footed animal.

The first place in which this curious habit was observed was on a hill in the midst of a desert. The hill was covered with yuccas and magueys, but the nearest oak-trees were thirty miles away; and so, it was calculated, these industrious birds had to make a flight of sixty miles for each acorn stowed thus in the stalks!

An observer of birds remarks: "There are several strange features to be noticed in these facts: the provident instinct which prompts this bird to lay by stores of provisions for the winter; the great distance traversed to collect a kind of food so unusual for its race; and its seeking, in a place so remote from its natural abode, a storehouse so remarkable."

Can instinct alone teach, or have experience and reason taught, these birds that, far better than the bark of trees or crevices in rocks, or any other hiding-place, are these hidden cavities they make for themselves within the hollow stems of distant plants?

This we cannot answer. But we do know that one of the most remarkable birds in our country is this California woodpecker, and that he is well entitled to his Mexican name of *el carpintero*—the carpenter-bird.

FRED A. OBER.

ABOUT HUMMING-BIRDS

ONE day in a certain June an excited lad brought to his mother a young humming-bird. The child had accomplished the capture so deftly, with his straw hat, that the wee, delicate creature had suffered no injury—not a feather was ruffled. The lad's home was a country place where, to shut out mosquitoes and other annoying insects, the house was completely barricaded with wire gauze, like one of Sir Humphry Davy's safety-lamps. Wire windows and wire doors, from garret to cellar, made the cottage a safe and spacious cage where the bird could roam at will.

It was caught on the very day when it first flitted from its tiny nest, before it could discover how wide the world is, and therefore it felt no sense of captivity. We called it "Hum," after Mrs. Stowe's "son of Buz," and it responded to its name as eagerly as a child or a kitten. The one thing it did not love was solitude. Its joyous flutter when any of the family entered the room seemed the greeting of a happy sprite. Its resting-place was the tassel of the window-shade, whither it withdrew when tired of flitting from room to room. Stairways were no obstacle to it, and it loved to explore the garret whenever the door was left open.

The only food we gave Hum was sugar, dissolved in water, which stood ready in a silver cup. When hungry or thirsty, he hovered about the cup and received his drink from a spoon I held up, while he balanced himself in the air. And he would vibrate over a bunch of petunias from the garden, thrusting his long tongue into each flower, and drawing out the honey with evident enjoyment. He spent much time at the top of the windows, going back and forth, just touching the glass with his tongue. We thought he was longing for the world outside, until, with something of a shock, we discovered that each thrust of his tongue impaled a gnat so small as to be almost invisible; and we soon found that these minute insects answered for the solid half of his luncheon.

I was an early riser in the country, but Hum generally awoke me by buzzing over my eyelids, until I opened them. Whether he did this because he was lonely, or because he wanted a drink from the cup that stood at hand, I could not decide. In the family was an aged lady, whose custom it was to take a nap on the sofa every summer afternoon. When she awoke, Hum was always perched within an inch or two of her cap. Sometimes he would alight upon the top of his yellow-haired captor's head as composedly as if the head had been a sunflower or a daffodil.

Though perfectly tame, he never confided in any other member of the family to that extent. When we went to dinner, we were obliged to close the doors against Hum, for he hovered over the table with so much curiosity that we feared he would pounce into some hot dish. Once I gave him a bath in a saucer of water. How small and helpless he looked after it!—not larger than a bumblebee. Until the sun had dried his regalia, he was unable to move because of the weight of water in the feathers. I did not repeat the wetting.

All summer long Hum gladdened us with his company, and the neighbors far and near came to see him.

When autumn came, the birds of passage seemed to linger for a while on their way to the South. Not far from our house a florist had a bulb-garden several acres in extent, and countless humming-birds flocked about his gladiolus plants and the Japan lilies. From these, one glorious September Sunday, they came by troops to our trumpet-creeper, and it was plain that they were mustering for a final flight.

Then we thought of poor Hum, and pictured him left behind this gay throng—lonely, and perishing in an unfriendly climate. A family council was called. Dear Grandmother said, "Give Hum his freedom." Father and Mother appealed to the children. They replied, almost tearfully, "We must let Hum go." Then we called to our pet, and he came with his quick, bright chirp. We opened the mosquito-bar. He passed out leisurely into the bright sunshine, then with quick darts sprang forward and upward to the trumpet-creeper, and soon joined his winged brethren. For days he hovered about, and when his silver cup was held up, he would approach; but he never came back to his cage. And by and by he disappeared with his companions.

The humming-birds, of which there are more than two hundred and fifty different kinds, belong wholly to the American continent, and chiefly to the tropical portions. The West India islands and the glades of the upper Amazon are particularly their home. Central America and Mexico have a less number, and about a dozen species penetrate the United States in Arizona and New Mexico. A few of them spread through California and the Rocky Mountains, while one solitary species bends its course eastward, and in rapid flight wings its way to the Middle and Atlantic States, to Canada, and even to the far forests of Hudson Bay. This is the ruby-throated hummer, and Hum and his friends about the creeper-vine were of that race.

The rubythroat — charming and expressive name!—generally appears here in May, and begins its nest-building in June. The nest is a little cup, holding perhaps two thimblefuls. Its walls are usually made of the soft down from flying seeds or fern-stalks. It is then thickly and prettily covered with wood lichens, and the whole is firmly attached to the upper side of a branch. One species, known as the black humming-bird, uses cotton instead of down, and other great differences are to be found in the architecture of the different sorts. Many South American species, for instance, tuck their warm beds into the curled pocket-like tip of a pendent leaf on some outer drooping branch of a tall tree. The eggs of every known humming-bird are pure white in color, which is remarkable; and those of our rubythroat are smaller than peas in size. After ten days of sitting, the mother-bird is rewarded by the cracking of the shell, and the appearance of the two little ones. While the eggs are hatching, the parent birds guard them with keen interest and care; and should any enemy approach their home, the tiny creatures fly at its eyes, picking with their sharp bills; their throats swell, they shriek, and really become little winged furies. They will even fly at a man and strike him.

The baby birds resemble bluebottle flies both in size and appearance. Most persons suppose, as we thought when we caught Hum, that the food

of humming-birds is wholly the honey of flowers. But to get and keep their strength they must have meat; and insects, therefore, form the staple of the hummer's diet. These they procure to a great extent by striking them down in the air, spearing them with their sharp tongues, as our pet speared the gnats at the window, where he could see them well against the light. If you watch one of these "bright little, light little, slight little hummers" in the woods, you may notice him constantly leaving his perch and darting into the air on short journeys. This is his way of insect-catching.

The nectar-cups deep in the heart of open-mouthed, sweet-scented flowers give the humming-birds their dessert. Poising on whirring wings before one of these deep blossoms, the bird thrusts in its long beak and slender head, until with its tongue it can reach the little sugar-fountain at the base of the blossom where the seed is growing. Its tongue is as sharp as an awl, and it is easy work for it to pierce the honey-capsule and lap up the sweets. But here the humming-bird often finds other delicacies; for the sweet, sticky gum of the flower attracts honey-loving insects, who, caught in this pleasant trap, cannot pull their feet out of the nectar, and so die at once or live but a short time in vain struggles. Botanists will explain how this may be a curious arrangement for the benefit of the plant; but the humming-bird knows not whether the plant thrives by this sort of food. He knows only that he himself is very fortunate when he finds such a well-stored flower—a sort of top shelf where his preserves are kept.

The peculiar humming noise which gives the bird its name is made by the exceeding rapidity of the beating of its wings against the air as it poises before a flower or elsewhere. If it could not move its wings very swiftly, it would be impossible for it thus to balance itself; and if its wings were not very large, long and pointed, quite out of proportion to its size, it would be impossible for it to endure the continued exertion necessary in thus sustaining its stationary position in the air. The muscular power of a humming-bird's wings is undoubtedly greater, in proportion to the weight of its body, than that of an eagle. The length of the wings is so great that their quills often reach far beyond the end of the tail; and when they are shut, the tips of the wings cover each other above the back.

The only voice belonging to most if not all of the hummers is an exceedingly fine little shriek or squeal; just such a sharp, thin note as you would expect from so needle-like a beak. I have known persons who thought they heard them *sing,* but I think this must be a fancy and not a fact.

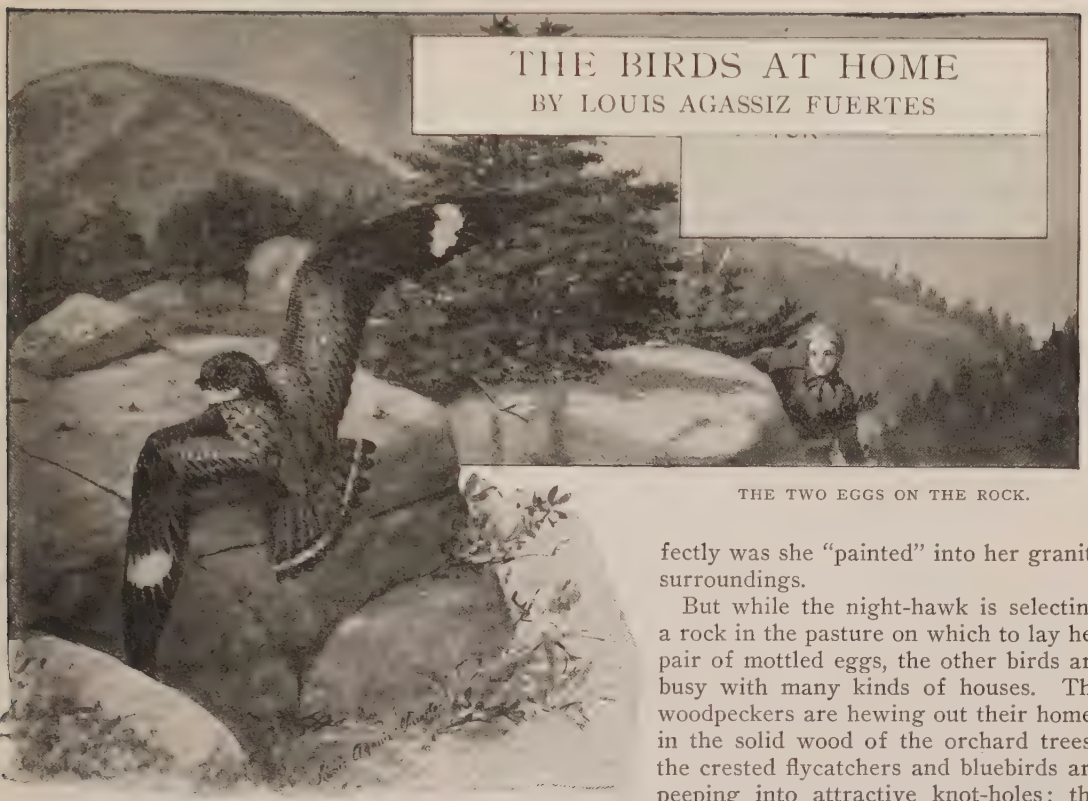
It is one of the pleasantest qualities of these gem-like, flashing, miniature birds, that they can easily be tamed. Hum's docility has been told; and many similar instances are recorded. I once received a letter from a little friend in California, who wrote as follows:

"I wish to tell you a little story that I think will prove interesting, and it is every word true. One day, when our flower-garden was being watered, a little humming-bird which was flitting from flower to flower became senseless from the effects of darting into a spray of the cold water.

"So sister and I took it into the house and laid it in the sun on the table. It soon began to show signs of life, when we fed it with sugar out of a petunia, which it ate quite heartily, and then it drank water out of a teaspoon; after which it was so far recovered that it flew about the room. We then let it fly out of doors; and for several weeks afterward it would come and light on a rose-bush by our window and look in at us, not flying away when we would open the window and reach out our hands toward it."

Mrs. Homer H. Stuart.

XIII—1



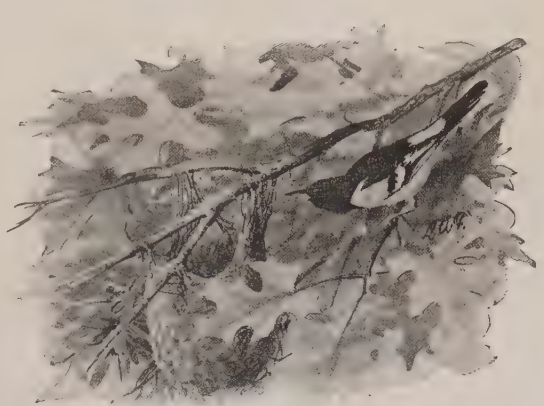
THE TWO EGGS ON THE ROCK.

THE MALE NIGHT-HAWK.
The male often assists in hatching the eggs.

WHAT is the matter with this night-hawk? Has he a broken leg or wing?

Not in the least. He is deceiving, in a manner common among birds that lay their eggs on the ground. He sat close on the eggs until the boy (it might have been a mink, cat, skunk, fox, or weasel) got almost to him. Then his courage failed, and he flew to save himself. But, as soon as he was a short distance away and had the full attention of the boy, he began to limp and flutter, and to display his bold black-and-white markings, trying to lure the danger a safe distance away from the nest, almost permitting himself to be caught. Then he flew away to safety, to return in a few minutes to the eggs. When the wings and tail of the male are folded the bright marks are all concealed, and nothing could be more beautifully "hidden in plain sight" than this same night-hawk. He is not only covered all over with little pictures of lichen and ground, but nature has even painted out the shadows on the bird itself! I have seen persons (and very sharp-eyed ones, too) who could not see a night-hawk sitting on a bare rock twenty feet away, so perfectly was she "painted" into her granite surroundings.

But while the night-hawk is selecting a rock in the pasture on which to lay her pair of mottled eggs, the other birds are busy with many kinds of houses. The woodpeckers are hewing out their homes in the solid wood of the orchard trees; the crested flycatchers and bluebirds are peeping into attractive knot-holes; the vireos and orioles are weaving their graceful hanging baskets; the meadow-larks and ground-sparrows are neatly lining a corner under a tussock or at the base of some pasture weed; the queer swifts are breaking off dead twigs for their curious little glued-up bracket-nest in the chimney; and the dainty, moth-like little humming-



THE BALTIMORE ORIOLE ATTACHES A HANGING NEST TO A BRANCH.

birds are at work on their tiny cradles of plant-down, lichens, and cobwebs. All birds have great

THE PHŒBE MAKING A NEST UNDER THE PROTECTING EDGE OF A ROCK.

THE MARSH-WREN BUILDS A NEST WITH THE ENTRANCE AT THE SIDE.

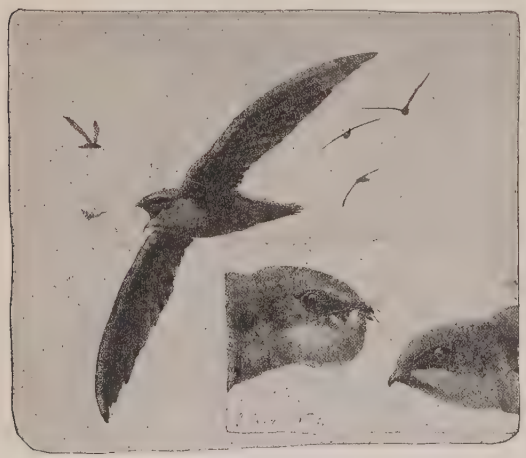
individuality. Some of this is manifested when they first arrive, but it is more marked in home-building and the care of young. Each kind has its own method of doing the regular household duties that come with a growing family. What a task it is to keep that nestful of yawning throats filled and quiet!

Swifts fly through the evening air, open-mouthed, trapping insects, like young folks with butterfly-nets. They store a quantity in their great throat before dashing home to tumble down the black chimney to their clamoring young.

In the marshes, industrious little wrens are making their big round nests. Each nest has an opening down on one side. The parent birds may make or begin a dozen nests and use only one of them!

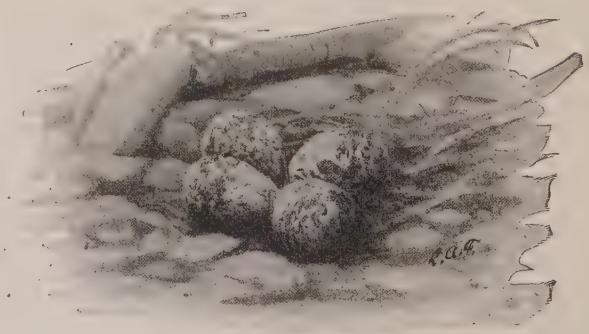
The phœbes are making their beautiful nests of moss and feathers under the rock ledges, the veranda roofs, or the country bridge. Later they will be hunting flies for their cavernous little ones. The sly cowbirds are silently searching for nests in which to lay their unwelcome eggs. The glossy, brown-headed blackbird that we see in the pastures has a bad name, as the dull-colored females never make nests of their own, but foist their eggs on other and better mothers, who rear the hungry changelings at the expense of their own broods.

Wrens, chickadees, bluebirds, martins, and sometimes crested flycatchers will come to bird-houses in our gardens. Such houses should not be too new nor exposed. They should be arranged so that cats and squirrels cannot get to them. If they do come, we can learn much more by watching them a season than any book can



THE CHIMNEY-SWIFT STUFFS THE "SIDE POCKETS" OF ITS MOUTH FULL OF FLIES.

This is similar to the manner in which a chipmunk packs grain and nuts in its mouth "pockets."



THE SANDPIPER PUTS ITS EGGS ON THE GROUND WITH BUT LITTLE IF ANY NEST-LINING.

teach us. Nearly all birds build nests for their eggs, each pair selecting a pleasant and secure place, while some kinds—mostly water-birds—form immense colonies.

PREPARED TO DEFEND THEIR STRONGHOLD AGAINST ALL COMERS.

I have seen two thousand flamingoes' nests in one community, and some of the guillemots breed in numbers vastly greater. Some birds build no nests, but, like the night-hawk, whippoorwill, and some sandpipers, lay their earth-colored eggs right on the ground or among the dead leaves.

BARN-OWLS AT HOME

A curious hissing noise came from the large red maple under which I was standing. Nothing was visible overhead to indicate the author of the curious sounds, and I realized that I was in the presence of a real mystery. After a rather difficult climb of some twenty-five feet, a cavity was found leading into the heart of the tree. It had widened out from the entrance into a good-sized chamber. Here, after my eyes had become accustomed to the darkness, were visible six young barn-owls, which crouched in the farthest corner. The mother bird awaited my next move in a defiant attitude. Quite a rumpus was raised in the family before three of the younger members were induced to sit for their pictures on a nearby log, an honor which the mother positively declined. Possibly she may have felt ashamed of her brood, for a more homely lot of youngsters never stood up to be photographed. From head to foot they were clothed in a suit of soft, yellowish down, and their long, solemn faces and little black eyes gave them a grotesque appearance. They did not object at all to being handled.

One little fellow was only about half as large as his brothers, and was probably fully a week younger. They were returned to the nest in good order; and I again visited them two weeks later, about the middle of June. This time the mother bird was not at home, but the younger members were well able to uphold the dignity of the family. In the interval of two weeks they had learned to use beak and claws wonderfully well. When trying to get them into a good position to photograph, although scarcely able to stand erect, they would crouch and spring at me, falling over each other in their efforts to reach the enemy, in a way that was very funny. The beautiful brown wing-

THEY HAVE CAST ASIDE THEIR DOWNY BABY-CLOTHES, AND ARE DRESSED IN A BRAND-NEW SUIT OF FEATHERS OF THE LATEST STYLE.

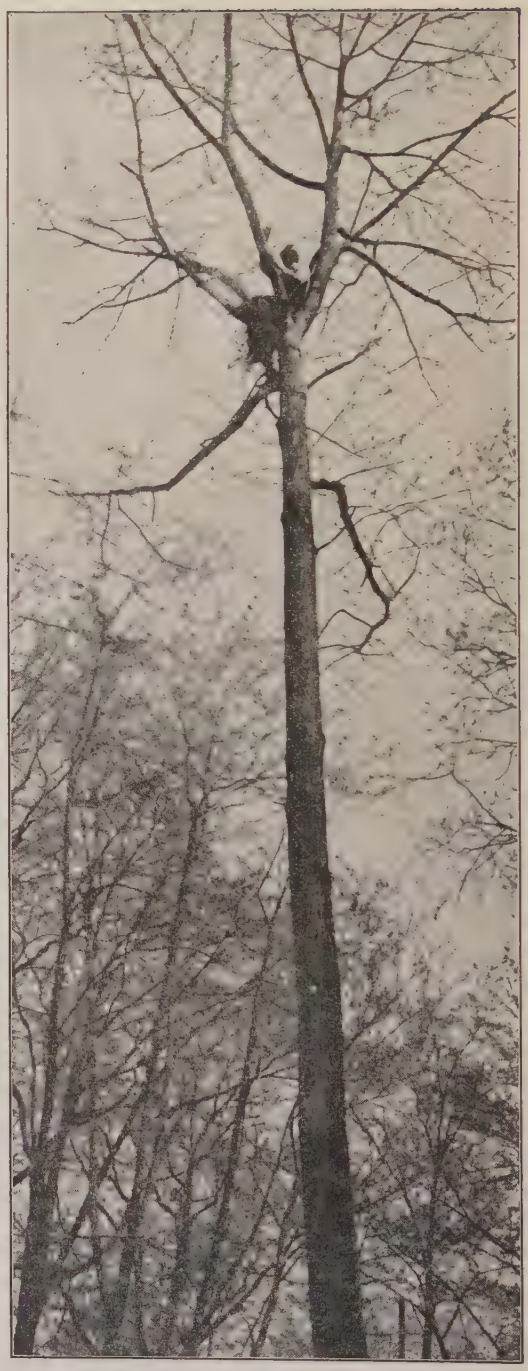
feathers were just showing, and the curious disks around the eyes were bordered with a band of brown, and for the first time you realized that they were beginning to look like real owls. So interesting had they become that I decided to take them home in order more leisurely to watch further developments. They showed great aversion to the cat, and whenever pussy

BARN-OWL AT THE AGE OF FIVE WEEKS.

came near she was sure to be greeted with a loud snapping of beaks and a threatening chorus of hisses, and she never seemed to desire any closer acquaintance.

MY FIRST HAWK'S NEST

It was a red-letter day in my bird-nesting experience when I found my first hawk's nest. It was a rainy April afternoon, and I was wading knee-deep in a Connecticut swamp, on the lookout for crows' or hawks' nests in the high trees which towered above me. As I splashed about, with my feet in the water and my eyes on the tree-tops, I caught sight of a mass of dark sticks



"I SAT DOWN BESIDE THE NEST, AND MY BROTHER TOOK MY PHOTOGRAPH."

in the upper part of a tall chestnut-tree. I knew that it was a nest, but whether it belonged to a crow or a hawk, I could not tell at that distance. But on going closer, and looking at it through a

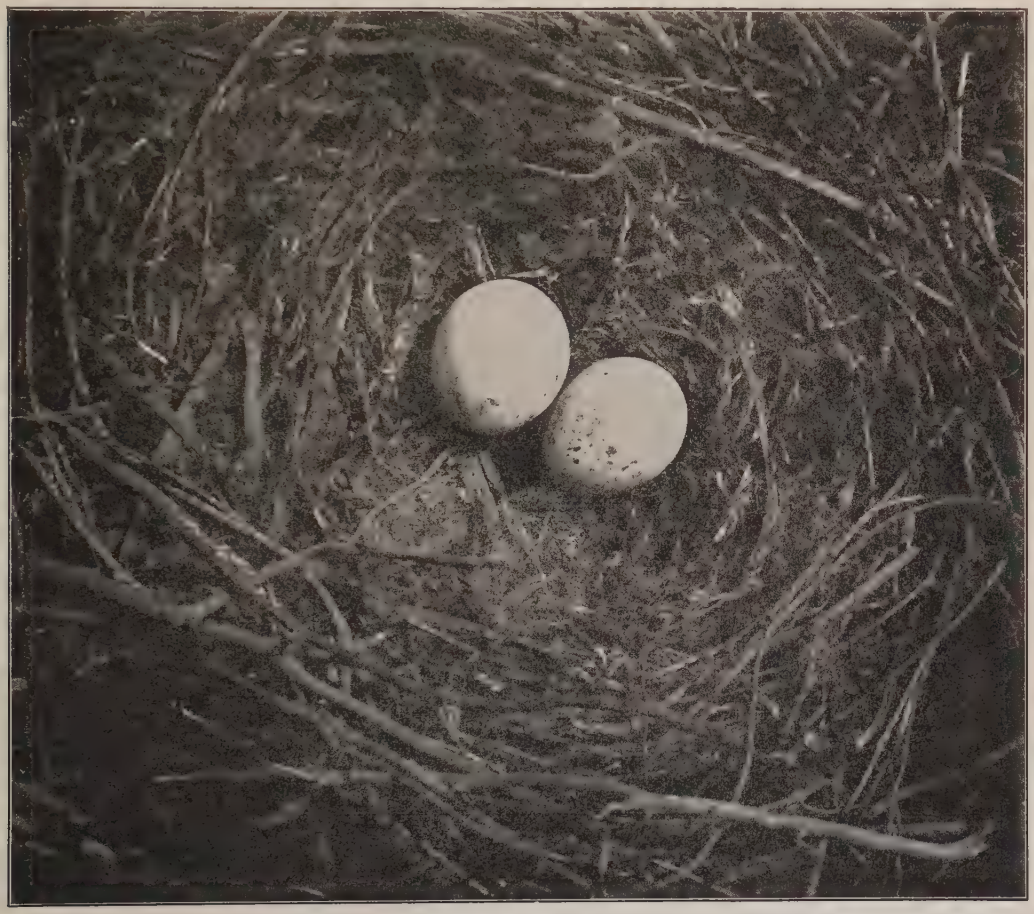
field-glass, I could see the tail-feathers of a bird sticking out over the edge; not the black tail-feathers of a crow, but the black-and-white-barred ones of a red-shouldered hawk.

The next question was, how to get up there. The nest was fully sixty feet from the ground, and the first branch was over fifty feet up. But I must at least try, so I threw off my waterproof and started to "shin up." It was very hard work though, for my hands were wet, and the bark was slippery from the rain. I managed to get up about forty feet, and then I decided that I did n't care about seeing any hawk's eggs that day. The tree was so slippery that I could n't get a safe hold, so I was obliged to slide to the ground as best I could. But I was determined to try again on the first fine day. I simply could n't sleep for thinking of those eggs.

So, early on the following Saturday morning, my brother and I set out for the swamp, determined to reach the nest if we could, and, if possible, take a photograph of it. We took with us, besides the camera, a ball of twine, a coil of rope, and a little basket containing our luncheon.

When we reached the tree one of the birds was upon the nest; but presently she flew off, and, alighting on a nearby tree, sat shaking and preening her plumage.

I was dressed for the occasion. I had on a white sweater, a pair of corduroy knickerbockers, and two pairs of thick woolen stockings. The latter precaution will be appreciated by every boy who has scratched his legs shinning up a rough tree.



THE HAWK'S NEST AND EGGS. (FROM A PHOTOGRAPH TAKEN BY THE AUTHOR.)

Stuffing the ball of twine into my hip-pocket, I was ready for the ascent. My brother good-naturedly stooped down, close to the trunk, and allowed me to mount on his shoulders, and then, straightening to his full height, he lifted me up nearly six feet. I told him he was very good *as far as he went,* and I only wished that he went a

little farther. There was now a straight "shin" of about fifty feet, and I went to work. Gripping the bark with my hands, knees, and toes, I gradually hoisted myself up, a foot at a time. I had gone about forty feet when my brother suddenly shouted "hold tight," and the next instant there was a rush of air on my face, as one of the angry hawks swept past within an inch of my head. It was lucky for me that I did "hold tight," for had I lost my grip on the tree in the excitement of the moment, there was nothing to save me. Twice again, before I reached the nest, the bird swooped down unpleasantly close to my face.

By the time I reached the first branch I was somewhat out of breath, so I sat down for a minute or two. In the meantime my brother made ready to take one picture from the ground. I now stood up, and seizing one of the branches above, lifted myself into the nest. There I found two bright-eyed little hawks, covered with soft white down, and two large white eggs, scantily speckled with reddish-brown. The old hawks were sailing in circles far up against the blue, uttering their cry of *keé-you, keé-you.* I sat down beside the nest, and taking up one of the eggs, held it aloft in my hand. As I did so my brother took my photograph.

Lowering one end of the ball of twine, by the weight of a stick from the hawk's nest, I soon drew up the coil of rope, and then the camera.

Climbing a little higher up, I lashed the camera firmly to a branch, with the lens pointing directly into the nest. I focused it, and then waited patiently for the young hawks to be still. I had expected to photograph eggs only, and had no fast plates with me. But the little rascals kept twisting their heads first in one direction and then in another, until I was obliged to put them into our lunch-basket and lower them to my brother. I was then able to take the photograph of the nest and eggs, which accompanies this story. After taking the photograph I drew up the basket and replaced the young birds in the nest.

If any of the boys or girls who have read this story would like to see exactly what the baby hawks looked like, they can do so by paying a visit to the Museum of Natural History in New York. There they will find, a little to the right of the Seventy-seventh Street entrance, a glass case containing a group, as natural as life, of red-shouldered hawks, representing the old birds feeding the downy young ones in the nest.

ERNEST HAROLD BAYNES.

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GHOSTLY WANDERERS OF THE NIGHT

SNOWY OWLS

(From mounted specimens.)

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Birds of the United States.—1. Cedar Bird (Ampelis Cedrorum). 2. Chickadee (Parus Atricapillus 3. Song Sparrow (Melospiza Fasciata). 4. Cardinal (Cardinalis Cardinalis). 5. Wood Pewee (Horizop Virens). 6. Red-Eyed Vireo (Vireo Olivaceus). 7. Black-Throated Green Warbler (Dendroeca Virens 8. Chestnut-Sided Warbler (Dendrocca Pennsilvanica). 9. Baltimore Oriole (Icterus Galbula). 10. Chimn Swift (Chaetura Pelagica). 11. Scarlet Tanager (Piranga Erythromelas). 12. Cowbird (Molothrus Ater).

13. Golden-Crowned Kinglet (Regulus Satrapa). 14. Tree Swallow (Tachycineta Bicolor). 15. Bluebird (Sialia Sialis). 16. Kingbird (Tyrannus Tyrannus). 17. Wood Thrush (Turdus Mustelinus). 18. Rose-Breasted Grosbeak (Zamelodia Ludoviciana. 19. Oven-Bird (Siurus Aurocapillus). 20. Indigo Bunting (Passerina Cyanea). 21. Maryland Yellow-Throat (Geothlypis Trichas). 22. Redstart (Setophaga Ruticilla). 23. Least Flycatcher (Empidonax Minimus). 24. Purple Finch (Carpodacus Purpureus).

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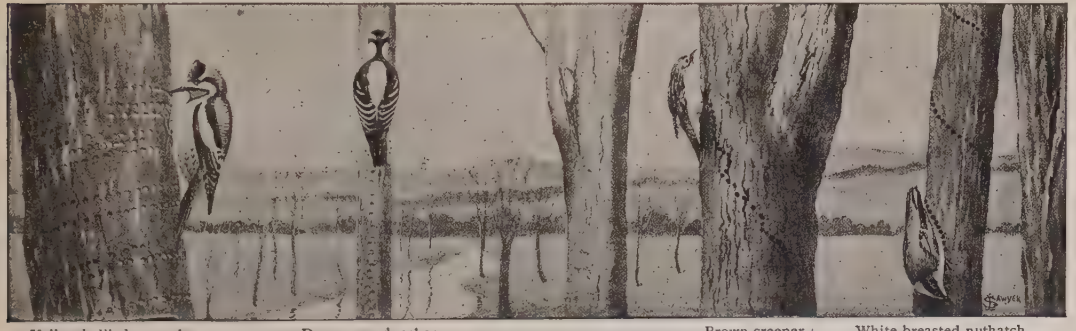
HOME OF THE NIGHTINGALE, AMID TANGLED VINES

VARIOUS FLIGHT-POSITIONS OF BARN-SWALLOWS, AND THEIR CORRESPONDING "SHORTHAND."

How grand is the hawk or the eagle sailing far away in the blue sky! And how beautiful are the song-birds, each in its favorite position to sing, the song-sparrow with head thrown back, the bobolink sailing down to the grass with raised wings! Those who have spent much time watching birds in the field know how differently the various birds perch, fly, run, climb or feed. The warblers catch flies, but they do not do it in such an interesting way as do the true flycatchers. We come to know a bird by the flight or walk, just as we know other friends by their gait or even by the sound of their tread. In flight, the wings of many different birds make peculiar sounds whereby we may know the birds even if they



Yellow-bellied sapsucker. Downy woodpecker. Brown creeper. White-breasted nuthatch.

MODES OF PROGRESS OF TREE-CLIMBING BIRDS ON TREE TRUNKS.

The courses of the two at the left are indicated by the birds' borings in the bark. The dotted lines on the two trees at the right are made by the artist to show the birds' courses — they are not borings by the birds.

themselves are out of sight. It is not at all necessary to get close enough to a bird to see its exact color, or the shape of its bill and feet; for its movements and outlines can be seen at a greater distance; and so we may know the bird even though it should fly away, as birds often do as soon as we try to stalk them for a nearer view.

There are many unexpected delights to be and scanning the twigs and *upper* side of leaves. A flycatcher selects a dead or exposed bough, where he *sits* motionless, upright, tail drooped, until he leaves the tree entirely, though perhaps to return after the pursuit of a flying insect.

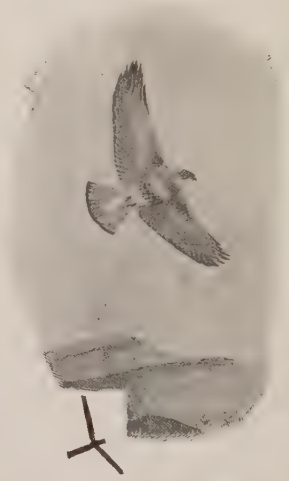
Of inland water-birds,—ducks, geese, loons, and grebes may be distinguished from gulls and terns by a straight-forward flight, never

FLIGHT POSITION OF MALLARD DUCK.

Also of other wild ducks, geese, loons and brants.

FLIGHT POSITION OF NIGHTHAWK.

Also of sparrow hawk.



FLIGHT POSITION OF RED-TAILED HAWK.

Also all the soaring hawks, gulls and eagles.

discovered by any one who will closely watch the flight of birds. Watch even the familiar barn swallows for one hour, as they dart and sail and skim and wheel and float and hang suspended and drift away on the breeze. You will be convinced that there are few things more graceful in all nature.

Some positions and movements are common to all the members of a certain bird-family; others are peculiar to a species. First we shall look at the *family* movements and poses, taking a few families to illustrate. Among perching birds, thrushes usually *stand* motionless; sparrows stand or *sit,* but are less at ease than the thrushes, more restless. Both these families generally assume a slanting position on the bough. Orioles usually progress in trees by "sidling" along the branches, vireos by flitting from bough to bough, repeatedly hovering *under* the leaves; warblers, by hopping from twig to twig, while exploring one main branch zig-zagging or slowly soaring like the long-winged swimmers. Ducks have a more rapid wing-beat than geese; which, in turn fly with a rather heavy motion, somewhat like the loon's. The several families may usually be further distinguished by the size and the shapes of the flocks. Loons usually go singly, and are more often to be seen in flight than grebes, who also travel without flocking. Compare the upright position of the owls with the prone nighthawk and the whip-poor-will; one sleeps "standing up," and one "lying down."

Among the tree climbers there are still nicer distinctions, both in the *manner* of climbing and the courses of the birds upon the trunks. The woodpeckers, with feet and tail adapted to clinging to an upright surface, and with bill adapted to drilling even in hard wood, goes straight up the trunk; then comes the slender-billed and weak-footed creeper, who must keep to the cracked bark, since he cannot bore for

his food. His course over the tree-stem is therefore zig-zag, from crevice to crevice. The nuthatches love to go winding up a tree like vines; now they are on this side, now on that. Not having the stiff pointed tail feathers of the woodpecker and the brown creeper, and having only three toes besides, nuthatches must turn partly sideways on a tree-trunk. Hence, their course is winding; or else they climb by turning from side to side with every step or two; but the tail is of no use as a prop, so it is held off the bark. Still another climber-and-creeper is the black and white warbler, who, having nearly the feet, bill and tail of a nuthatch, progresses in about the same way, but has rather more of a liking for crotches and the less upright branches.

In the woodpecker family, the yellow-bellied sapsucker has a way of "edging" around a tree-trunk. His course is marked by his borings, or rather *drillings*, which girdle the trees, instead of being scattered or running up them, like those of the other woodpeckers. This brings us to a finer distinction than that of families. A striking instance of the difference in the poses of birds of the same family is seen in the upright tail of the true wrens and the horizontal, or else drooping, tail of the brown thrasher, mocking bird and catbird. The bluebird is the only member of the thrush family having decidedly peculiar habits of flight and perching. Other birds, of even more strikingly peculiar attitudes, are the bobolink, kingbird, cowbird, yellow-breasted chat, sparrowhawk.

In learning to know the birds by their outlines—that is, their attitudes, whether at rest or in motion—a system of simple sketches, or even lines, like those under the illustrations of this article, would save time and a good deal of note-taking. To indicate the appearance in flight, two lines for the wings, or one line crossing the body-line, and a line for the body, tail and head will usually be enough. For birds with very broad or deeply-forked tails, two lines may be used to show the spread of the tail (see heading). Notice, in the flight sketches (on page 18), where the wings join the body; in the nighthawk near the head, in the wild ducks about half way between the head and tips of tail. Also notice how the relative length of wings, tail, and neck and head is indicated by the shorthand. Any of these shorthand signs may be used as the framework for an outline sketch; they will serve to recall the figures of the birds at any time when you can draw the outline to better advantage than you could by trusting to memory alone, just as a stenographer uses his shorthand notes. All birds who sing from a perch will be found to assume one of the four attitudes here illustrated, or a position so nearly

SINGING POSE OF BOBOLINK.

ALMOST UPRIGHT POSE OF BROWN THRASHER.

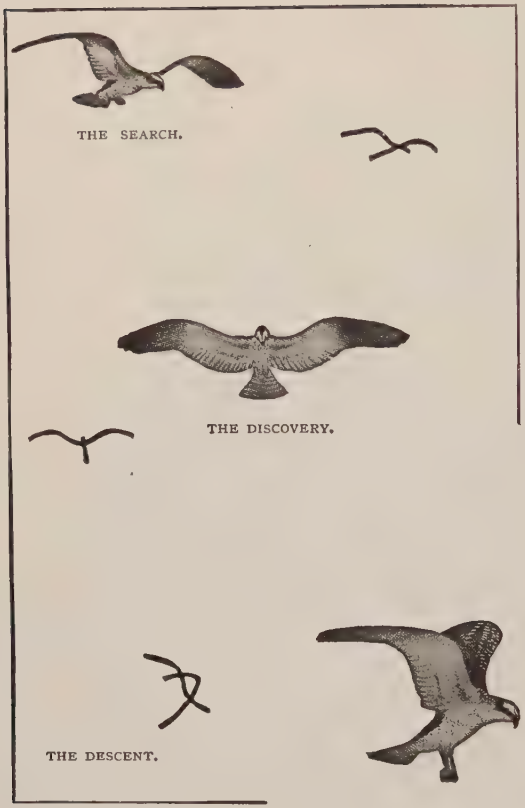
Also of catbird.

SINGING POSE OF HOODED WARBLER.

Also of Maryland yellow-throat.

SINGING POSE OF SONG SPARROW.

Also of other sparrows, some warblers and orioles.



like one of these that it may be fairly represented by a mere change of the slant of one or more of the lines. You can easily construct other diagrams in the same way, to show position in rest, feeding, swimming and so forth.

All the figures of flying swallows shown in the heading are from sketches made in the field without even the aid of an opera glass. They were selected from about half a hundred sketches of barn swallows, every one of which was made in less than two or three minutes. The five original sketches of the osprey were made in the same way, but from a single bird who was "fishing" in a little river.

The *course* of flight is a distinguishing character of many birds. The grouse rises gradually while flying in a straight course; the woodcock rises to a height of several feet, or even yards, then flies straight away; the cuckoo's flight is also in a straight line, but peculiarly arrow-like, being graceful and silent, the long slender tail and body of the bird still further suggesting an arrow. A number of the birds, notably the brown thrasher and the song sparrow, progress in short flights, as from bush to bush, with a queer, eccentric or bobbing motion as if their flapping tails were a great hindrance. A Wilson snipe flies in a zig-zag line; a goldfinch, in long undulations or bounds. All of these and many other ways of flying can be indicated by dotted lines in the note-book, supplemented by such words as "sailing," "rapid," "slow," "heavy" or "graceful" flight, and "rapid," "slow," "silent" or "clattering" wing-beats; the wings of the grouse *hum*, those of the woodcock and the mourning dove *whistle*.

You will find that birds' movements and attitudes are just as suggestive and interesting as their colors are, and even more useful in naming the birds when they are once learned; for, as already mentioned, the outline of a bird can usually be clearly seen at a much greater distance than can its color or the exact shape of its bill and feet. The course of a bird's flight can often be seen distinctly enough to be recognized, when the flyer is so far away that we could not tell whether it is dark or light.

EDMUND J. SAWYER.

THE RHINOCEROS-HORNBILL

One of the most grotesque and clumsy-looking of birds is the rhinoceros-hornbill, and its habits are as peculiar as its appearance would lead one to believe.

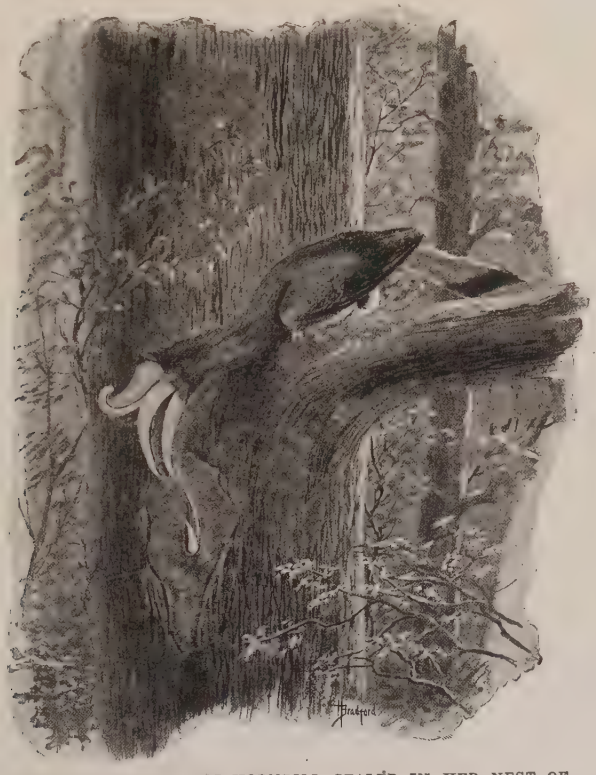
The hornbill family of sixty species, varying in size from that of a jay to a raven, is scattered over parts of the Ethiopian, Oriental, and Australian regions.

The illustration represents a rhinoceros-hornbill from Borneo, and his body is about the size of a large raven. The horn differs greatly in the various species, while in some it is entirely absent. In the rhinoceros-hornbill the horn is bright red, with an underlying section of white, while the bill is white at the tips and back for some distance, then fading into yellow, and then red near the head. The skeleton is very bulky, but the bones are unusually light, being hollow, thus giving the greatest strength with a minimum weight.

Hornbills of the Indian Archipelago are fruit-eaters, while those found in Africa are in part carrion-eaters. The larger species are very awkward in flight, as well as in procuring food. It is said the noise of their clumsy, flapping wings may be heard a mile off.

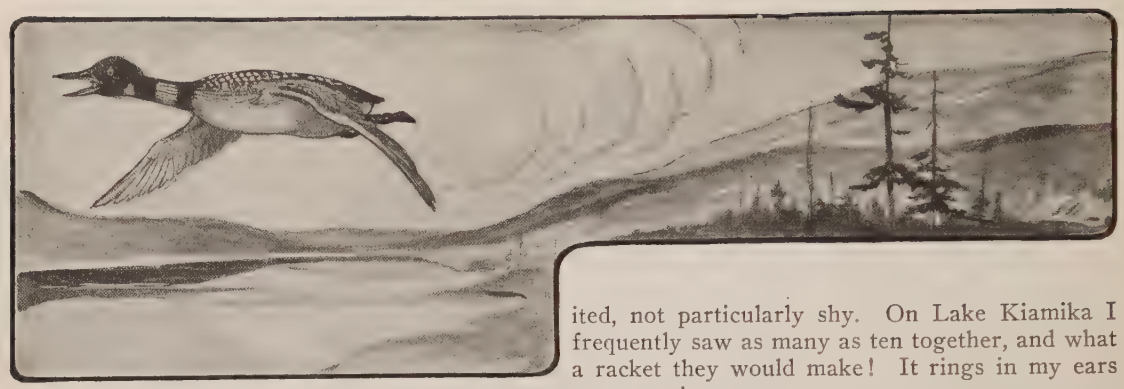
The nesting habits of these birds are most unique. The female is sealed in her nest with mud, etc., till her one egg is hatched. The nest, usually found in a very large tree, is composed of pieces of bark, and is about three feet below the opening, which is usually thirty feet or more from the ground.

Authorities differ as to whether the female plasters herself in for protection from enemies or whether it is done by the male to prevent her leaving her nest before her egg is hatched. The plastering takes two or three days, and a hole only an inch wide and four or five inches long is left open for her bill to stick out, to receive food which her mate brings. As the male brings the food he calls attention to that fact by rapping on the tree till her bill is thrust through the opening.



MOTHER RHINOCEROS-HORNBILL SEALED IN HER NEST OF MUD.

Only a small opening is left, out of which she can put her bill to take food from her mate.



The loon that laughs and flies
Down to those reflected skies.
Longfellow.

THE GREAT NORTHERN LOON

One often hears the expression, "As crazy as a loon," and yet I wonder how many realize, even when using it, how peculiarly fitting it sometimes is. Of all the birds and animals that have come under my observation, I know of none that in any degree approaches the loon for sheer craziness or weirdness. Last summer while in Canada I had many opportunities of studying these strange birds in their native haunts. They were very numerous and, as the country was uninhabited, not particularly shy. On Lake Kiamika I frequently saw as many as ten together, and what a racket they would make! It rings in my ears even now!

"AS HE SITS MIRRORED IN THE LAKE"

Evening seems to be the loons' favorite time for their peculiar behavior. They collect in the middle of a lake, and when they have summoned all of their kind within hearing, the "ball" commences. They raise their bodies half out of water by furiously flapping their wings, at the same time making a most terrific splashing. They then propel themselves backward and forward, half swimming, half flying, all the while screaming at the top of their voices. They keep this up from ten to fifteen minutes, and seem to get a great deal of satisfaction out of it. Talk about the welkin ringing! why, in the calm of a summer evening, and aided a bit by the echoes, a half-dozen loons can make a college cheering section hang their heads for shame!

The loon is not only crazy-acting, but at times is very aggravating. Perhaps, for instance, after a hard day you are sitting by the camp-fire, quietly smoking and at peace with the whole world; suddenly there breaks upon your ears the most blood-curdling scream, followed by heart-rending cries. Your first thought is that there is a child being murdered or a woman in distress, and you start to your feet. Then you realize that it is only a loon. Or perhaps, having "turned in," you are sleeping the sleep that comes only in the pine-scented North. Again you start and wake as you hear a long, mournful cry echoing through the forest, and involuntarily exclaim, "Wolves!" There is a grunt, and the sleepy voice of your guide comes from the depth of his blankets, "Non, m'sieu'; loon."

In the morning a hunter arises bent on vengeance for his broken repose, and resolves to destroy the fiend as he sits mirrored in the lake. Although the modern cartridge rifle gives no warning of the shot as did the old-fashioned flintlock with its "flash in the pan," nevertheless, the loon nearly every time seems to know when

the bullet is coming and dives just in time to escape. Immediately after the discharge of the rifle, the loon is serenely up again, his mocking laughter being but an added irritation. On the whole, he seems rather to enjoy the performance.

As a diver the loon excels, and naturally, for it is his sole means of livelihood. Not only is he marvelously quick, but he can remain under water for a seemingly endless time. In swimming under water he uses both wings and feet, and can go for several hundred yards in this fashion. The loon, like many other water-fowls, sleeps on the water with his head tucked under his wing.

Speaking of sleeping loons, some few summers ago a friend of mine, while camped on Lake Ki-

"HE ACTUALLY SUCCEEDED IN PADDLING UP AND CAPTURING HIM."

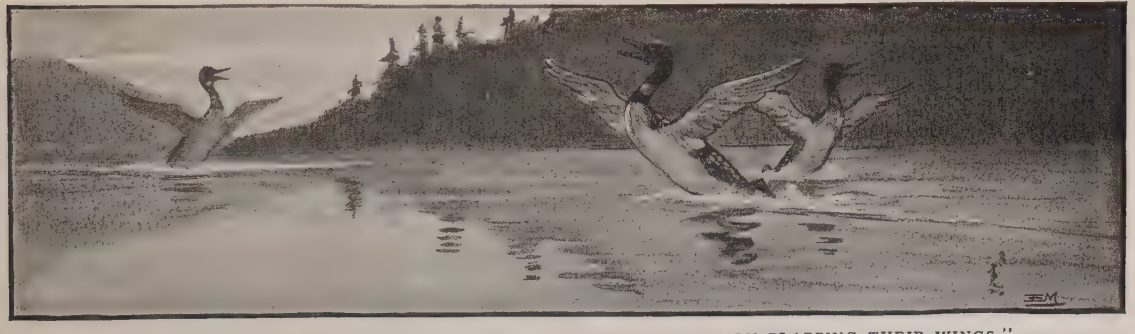
amika, was out for an early morning paddle. It was just after dawn and very still. Out on the lake he espied a sleeping loon, and by dint of careful paddling he actually succeeded in approaching and capturing him. Proud of his capture, he took the loon ashore and tethered him to a stake. The loon struggled at first, but after a while seemed to become reconciled. All went well until nightfall. Then the loon set up such a hideous outcry and kept it up so persistently that before morning he had earned his freedom.

"HE TETHERED THE LOON TO A STAKE."

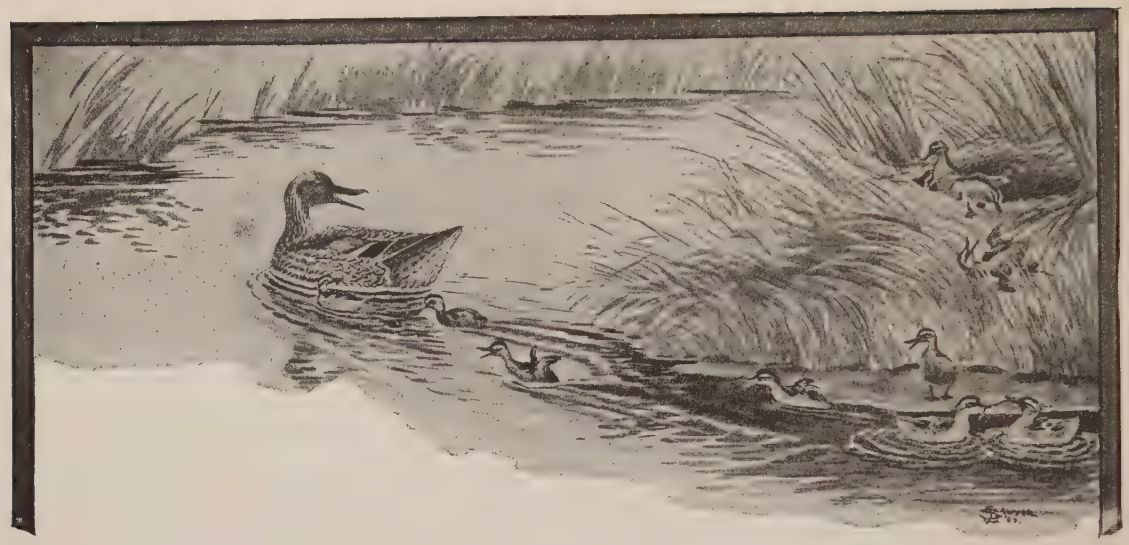
I tell this story with some fear that I may be accused of "nature faking," but if any one doubts me I can readily prove it to be true. I have been told that the loon is very curious and can be attracted by any unusual moving object, such as a rag waving on the end of a stick, especially a red rag. I have tried this scheme, but without success, although I may not have kept it up for a sufficient length of time.

Possibly those who are acquainted with the loon will, upon reading this description, consider themselves lucky and indulge in self-congratulation. Yet I would not have it so, nor is it my desire to detract from the loon's fair fame, for with all his faults he is both quaint and amusing, and one learns to love and admire him. He is a happy-go-lucky fellow, and without him the lakes would be lonely and desolate.

S. Edwin Megargee, Jr.



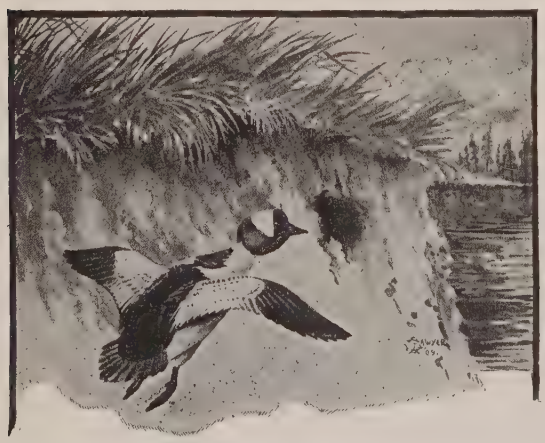
"THEY RAISE THEIR BODIES HALF OUT OF WATER BY FURIOUSLY FLAPPING THEIR WINGS."



SHOVELER DUCK (FEMALE AND YOUNG).
Going for their first swim.

WILD FOWL AT HOME

It may be that in early spring months we have seen the last wild ducks and geese depart for their summer homes in the North. They came in March and April, spent a few weeks here, filling up their time by feeding and playing in lakes, rivers, and flooded pastures, and then left us. What are they doing now? Very much what the sparrows, warblers, and thrushes have been doing



BUFFLEHEAD DUCK.
Called "butter-ball" and "butter-box" because he is so fat. Nesting-place in a hole in the bank. The nest is also built in hollow trees and stumps.

in our fields and woods; but, although the domestic life of wild ducks and geese is passed in surroundings very different from those of such birds, it is not less interesting.

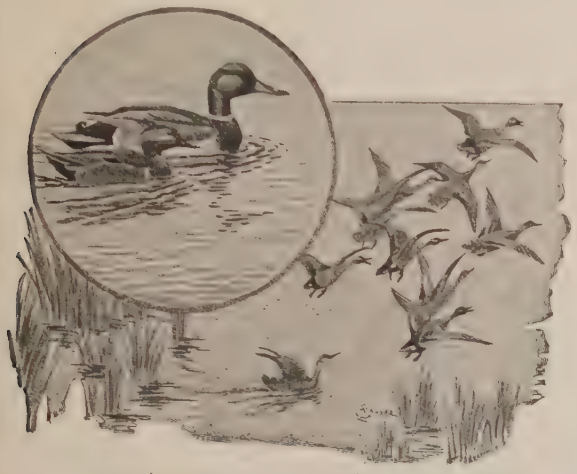
Many of the ducks and geese have gone to Canada for the summer, but many more only to our Northern States. Perhaps their best-known summer home in the United States is the marshy prairie region of Dakota. Here every year wild geese and many species of wild ducks still rear their broods. Mallards, pintails, redheads, teal, shovelers, and scaup ducks make this their nesting-place. They begin to nest in May, but many of the broods are not hatched till the middle of July, some kinds being later than others, as among the members of other bird families.

It must not be thought, however, that all the ducks forsake us. To the rule there are two notable exceptions, the gorgeous wood-duck and the black or, more correctly, the dusky duck. Strange to say, these "black" ducks have each two tufts of long feathers of the purest snowy white, although we scarcely ever see them in the living birds, because they are next to the body, and usually concealed beneath the wings.

How fortunate we are in having just such birds as these for neighbors! The black in her nesting habits perfectly represents the majority of ducks. The wood-duck represents the few which lay their eggs in hollow trees. We do not often come across the nests of either of these birds, but the possibility of such an interesting event should stimulate our excursions to swamps and swampy woods.

One of my cousins, while fishing from a row-boat, once saw a little black duckling among the

rushes in the river. A chase began at once, but it was only after a long, hard row that the swimmer was overtaken and captured. When I first saw him he was a big, fat duck among the domestic fowls in my cousin's back yard, and in his lazy, contented manner there was nothing whatever to indicate that he was not born in an



MALLARD (COMMON WILD DUCK) AND THE GREEN-WINGED TEAL, A "TOY" DUCK.
Flock of green-winged teal.

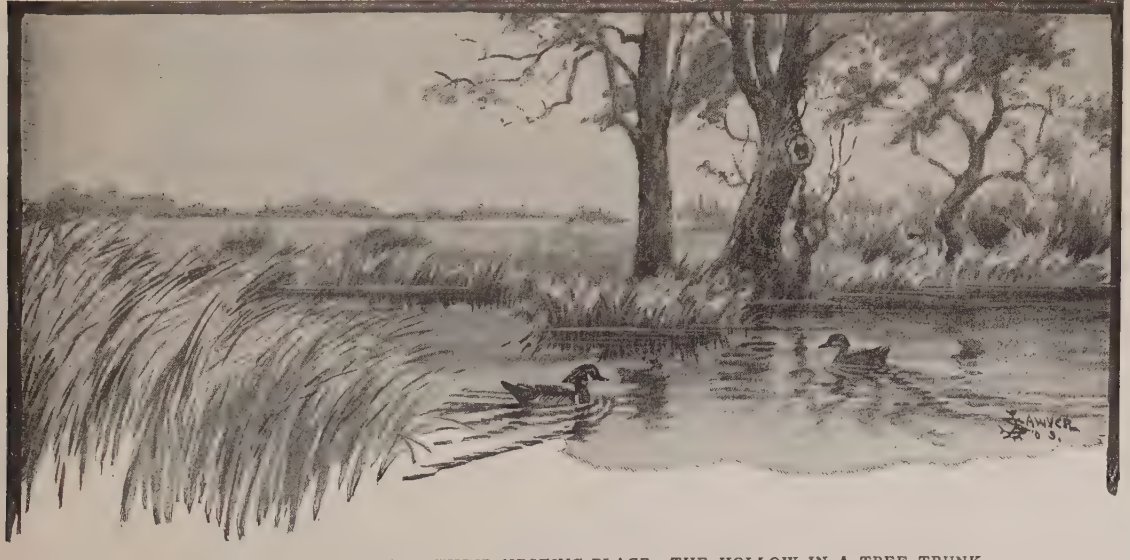
incubator. A year or more later, on inquiring about him, I was sorry to hear that a jealous rooster had killed him.

Most ducks build in clumps of rushes or of long grass near the water. A few build in hollow trees, sometimes so far from water and at such a height from the ground that it is believed by many that the little ones are carried to the ground in their parent's bill. The tree nests are

NEST OF THE CANVASBACK DUCK.
A typical duck's nest—a feather-lined cradle in a tussock of the marsh, surrounded by water.

lined, like most of those on the ground, with downy feathers from the duck's breast. In this soft bed the eggs lie warm even in the far Northeast, where the Fourth-of-July temperature is only a delusion.

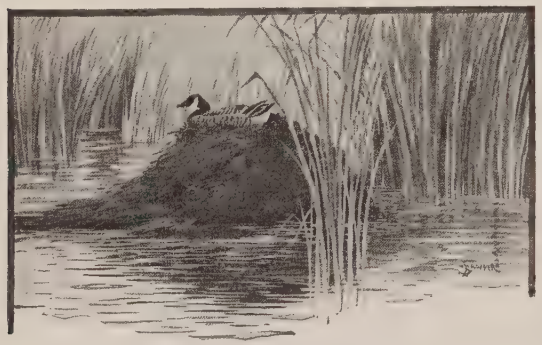
The eggs of wild ducks are so much alike that I need not describe each kind separately. From whitish they vary in shade and tint to a distinct olive or olive-brown. Dull cream color seems to be the most common tint. This is the usual color



A PAIR OF WOOD-DUCKS AND THEIR NESTING-PLACE—THE HOLLOW IN A TREE TRUNK.
The wood-duck is the handsomest of our wild ducks, and one of the few which do not go far north to nest.

of eggs of the wood and the black ducks and many others. The large eggs of the Canada (wild) goose are whitish, like those of many of the ducks, and, like ducks' eggs, they are widest near the middle instead of near one end. Like most birds which are killed in large numbers by sportsmen, wild ducks rear large families. A set of nine eggs, like that shown in the illustration, is about an average. A nest may have two less or sometimes three less, but many sets of a dozen and often thirteen are found.

Ducklings are much alike in being attractive, downy little fellows, awkward on land but expert swimmers. When an hour or two old they go for their first swim—one cannot say their first swim-



A CANADA OR WILD GOOSE ON HER NEST ON A MUSKRAT'S HOUSE.

ming lesson; they never need to be taught. After that first hour in the nest they make the water their home. The rest of the summer is spent in swimming about with their parents. Doubtless they soon know every watery lane in their marsh as well as other young folk learn to know the lanes and nooks and corners of the neighborhood in which they play hide-and-seek.

Two months later we should hardly know the little chaps, so big and fat and well-feathered have they become. This fine development is nature's wise provision for their southern flight, when every fiber and feather will be of service to them. A month or two later the grassy marsh will be left to the muskrats, and the ducks will again be with us, this time on their journey southward. The appearance and habits of these autumn ducks are very interesting.

FEATHERED HIGHWAYMEN

It is a common practice, throughout the feathered race, for one bird to snatch a coveted morsel from another. This is interestingly and readily noticeable among little chickens. But only in a few species has the offense become a habit.

PARASITIC JAEGER AND GULLS.

Thus it is that in certain groups there are species that rely on the efforts of others to procure them an easy living. Perhaps the best examples of these depraved birds are the skuas and jaegers or hunting gulls. These, while belonging to the same family as the gulls and terns, are of a more hawk-like build, and this resemblance serves them in good stead as a means of procuring their prey. With the general make-up of a sea-gull, their wings are longer, the point of the bill well hooked, and, in most cases, a decidedly hawk-like coloration.

At the breeding-places of seal fowl in the far North, both skuas and jaegers, when opportunity offers, destroy the eggs and young of any species

BALD EAGLE AND OSPREY.

of bird smaller or weaker than themselves; but it is not until later in the season that their peculiar habits are in evidence.

There is only one species of skua found in

LONG-TAILED JAEGER, ADULT AND YOUNG.

America, a rare visitant to the Atlantic coast. In the Old World it is of more frequent occurrence, breeding from the Orkney Islands northward. It is of the size of a large gull, of a uniform brown color and very strongly built. In the Orkney Islands it is known as the bonxie, and in its defense of its eggs or young is the most courageous bird nesting there.

The skua will attack the largest gulls and make them disgorge their prey. Closely allied to the skua are the jaegers, of which there are three species, the parasitic, long-tailed and pomarine jaeger. All three breed on the tundras of the arctic regions, and migrate southward in August and September.

The parasitic jaeger is the commonest species, and his mission in life is to constantly harass and worry the pretty little Bonaparte's gulls. A flock of these charming little gulls will be busy with a school of small fish, darting down and seizing their prey while hardly seeming to touch the water. Suddenly, from nowhere, appears a long-winged, swift-flying apparition, terrifying in his likeness to their worst enemy, the peregrine falcon; hither and thither dart the screaming gulls while the jaeger, singling out his victim, pursues it through its most intricate twistings and turnings. Higher and higher mounts the gull, but the pursuer with hardly a movement of his wings is always close behind, until at last the gull, in an agony of fear, ejects from its mouth the fish it has lately captured. In an instant the jaeger wheels and drops gracefully downward, catching the fish in mid-air before it has reached the water. Over and over again this robbery is effected, each time with a new victim, until at last the jaeger, satiated, wings his way out seaward, and alights, light as thistle-down, on the water to digest his meal.

The adult parasitic jaeger is a very handsome bird, brown above, with a black cap, delicate yellow-tinged neck, and white breast; the two central tail-feathers are elongated far beyond the rest. The size is about that of a ring-billed gull. The young bird in the first plumage has the central tail-feathers only slightly lengthened beyond the others, and in color is dark brown all over, handsomely marked with light rufous. A long-tailed jaeger is very similar, the young bird lighter and grayer, and the adult with still longer central tail-feathers. The pomarine jaeger, the third species, is larger and of rather clumsier build, with duller coloration. All three have the same hawk-like aspect, especially in flight.

WIDGEON ROBBING REDHEADS.

Once while I was watching a large flock of Bonaparte's gulls, which were feeding on the wing, like swallows, on a swarm of flying ants, a couple of jaegers came along, completely

puzzled at the changed habits of their former fishermen. Presently what I took for a third jaeger shot into the maze of circling gulls, and for an instant I was astounded, for as he came in contact with a gull there was a slight click, and the gull whirled, stone dead, to the beach below. Only then did I realize that the supposed jaeger was a peregrine falcon, or duck-hawk. Shortly afterward I avenged the gulls by shooting not only the falcon, but the two jaegers as well.

Another highwayman is the bald eagle, who, though capable of catching fish for himself, prefers to let the more active osprey, or fish-hawk, secure him a meal. This habit is so well known, and has been written of by so many authors, that it is needless to enlarge on it here. Suffice it to say that the osprey is never hurt in any way, but is simply "bluffed" out of his hard-earned meal by his larger relative. This practice is common to several species of sea-eagles of the Old World. Many species of ducks are persistent thieves, but in their case the likeness is more to a pickpocket than a bolder robber.

The widgeon, or baldpate, is one of the worst offenders. Unable to dive in deep water for food itself, it filches scraps of weed from the bills of deep-diving ducks as they come to the surface. This habit is especially noticeable in winter when the shallower waters are frozen. The redhead is the principal victim though canvasbacks and scaups also suffer. A bunch of widgeons on settling among a large flock of feeding redheads, instantly scatter, each widgeon patrolling a different portion of the flock. No sooner does a redhead come to the surface with his mouth full of weed than a widgeon is at hand to deftly snatch a piece and make off. Active and graceful they can easily elude the more clumsy redhead, if the latter attempts to retaliate.

Widgeon also keep a close attendance on swans, whose long necks can reach many succulent roots and grasses otherwise unobtainable.

FIRST CHIPMUNK: "*WE* CAN PUFF *OUR* CHEEKS OUT AND MAKE THEM VERY BIG, BUT LOOK AT THAT FELLOW!"
SECOND CHIPMUNK: "THEY CALL HIM THE *POUTER* PIGEON, TOO. WE 'D NEVER POUT IF WE COULD DO THAT—WOULD WE?"

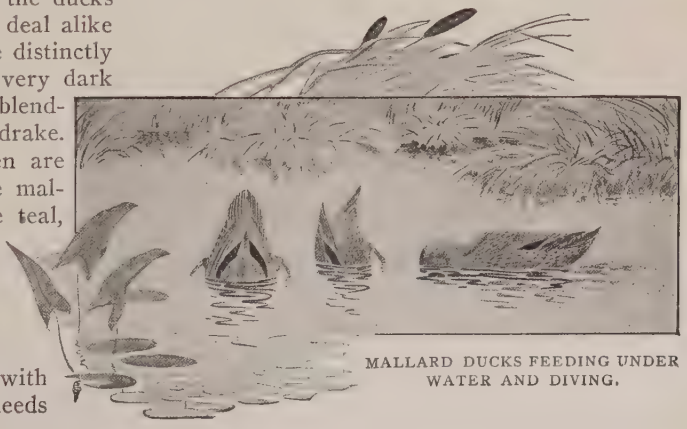
Ducks represented—background, scaup; on rocks, pintail; in foreground, mallard.

WILD DUCKS IN AUTUMN

By the river, the lake, and the swamp, where the tall grasses and reeds are sighing in the wind, an interesting company of birds is gathering. Perhaps we have made the acquaintance of some of them in spring when they went north—they are the wild ducks. Do not expect them to allow you so close a friendship as the robin and other birds that people do not often harm. For the ducks, you remember, are great game-birds, and so they have a dread of everything that looks at all like a shooter. So hide near the water and watch them from a distance. If we keep still and out of sight, they may come quite close. Most of the drakes are handsomely colored, while the ducks are generally grayish and look a good deal alike at a little distance. When you see one distinctly marked, black next to white, or any very dark and light colors which meet without blending, you may be pretty sure it is a drake. Three of the kinds we see most often are shown in the heading—the scaup, the mallard, and the pintail. Others are the teal, which you may know at a glance, they are so small; the widgeon, wood-duck, shoveler, black duck, baldpate, golden-eye, bufflehead, and the mergansers or fish-ducks.

If you succeed in getting acquainted with several of these you will do well. It needs patience and good eyes; and if you can add to these an opera-glass, you will be still better fitted for duck-hunting.

To stalk ducks near the shore in open water, approach them by short stages whenever all are under water at once. A duck will usually remain under water about half a minute; in the meantime you have covered a hundred feet or more of ground, and concealed yourself as much as possible, allowing only an opening to watch from. Sometimes one finds a feeding-ground where he can hide and wait for the ducks to come. This is the best way to observe them at



MALLARD DUCKS FEEDING UNDER WATER AND DIVING.

close range. I knew of a small pond, surrounded by willows and other bushes, where scaup-ducks came every day to feed. While waiting beside the pond I have seen a flock of ducks sail down over the water only a hundred feet from me, then turn and, coming back, repeat the performance. As they swooped down with set wings and making a loud, swishing noise, they were a fine sight, well worth an hour's waiting.

Although ducks are very wary and alert, they do not readily see danger when they are about to alight in the water. This appears to be a rather difficult act, for it seems to engage their entire attention.

Male. Female.

WOOD-DUCKS.

The wood duck is the most domestic of all the tribe, and is very apt to nest in some most unexpected place, close to human habitations. I know of one nest in a knot-hole of a large maple only six feet from the ground, right on a well-traveled road near a house.—HERBERT K. JOB.

The most common kinds of duck can rarely be seen closely. Even the black duck is not often to be studied, except at an aggravating distance, although he is found in every marsh. It is a common saying that water leaves no trail.

BLACK DUCKS AND YOUNG.

I am sure I would not exchange the quiet surprise and pleasure I feel, as, on rounding some point or curve in the stream, two or more ducks spring suddenly out from some little cove or indentation in the shore, and with an alarum *Quack, quack*, launch into the air and quickly gain the free spaces above the tree-tops, for the satisfaction of the gunner who sees their dead bodies fall before his murderous fire. He has only a dead duck, while I have a live duck with whistling wings cleaving the air northward, where, in some lake or river of Maine or Canada, I may meet him again.—JOHN BURROUGHS.

But where some black ducks had been pluming and sunning themselves I have read the story very plainly in the water, where numerous small downy feathers floated and clung to the grassy tussocks.

HAWKS AND THEIR USES

"Darn all hawks!" I once heard a farmer's boy say; and this highly objectionable but pithy exclamation very tersely expresses the general estimation in which birds of prey are held, the whole country over. Too often the dislike of the farmer-boy takes a more deadly form than a foolish remark, and the ever-ready gun is called upon as a final means of righting all assumed injuries.

In truth, the idea that every bird with beak and talons is a harmful creature, to be got rid of at first opportunity, is a widespread one, and so popular, withal, that legislators are ever ready to pass laws, not only permitting hawks and owls to be slaughtered at any and all seasons of the year, but putting a price upon their heads. In a period of eighteen months, the county treasuries in the State of Pennsylvania paid out $100,000 as bounties for the slaying of animals supposed to be harmful, of which amount, probably not less than $65,000 was paid for hawks and owls!

Nor need we seek far for the reasons of the feeling against birds of prey. The general dislike arises in large part from an utter ignorance of their habits and the useful purpose which they serve, and more directly from a bad practice, indulged in by a few species, of preying upon the farmer's poultry-yard, or of attacking game-birds. Let us then glance at the matter as impartially as we may, giving credit for usefulness where credit is due, placing guilt where it belongs, and then see to which side the balance falls.

FIG. 2. RED-SHOULDERED HAWK.

FIG. 1. RED-TAILED HAWK.*

For present purposes, our hawks may be roughly divided into two classes, though the two grade together: large and small, or slow fliers and swift fliers; for most of the big hawks are slow of movement, while all the small species are swift of wing. Singling out two of the largest species, which happen to be very numerous in the eastern United States, we find them to be the Red-tailed Hawk (Fig. 1) and the Red-shouldered Hawk (Fig. 2). Though, at a distance, it may trouble you to tell one from the other, their larger size generally distinguishes them from other kinds, whether they be sitting motionless on a dead stub, or sailing in wide circles high in air.

These especially are known as the "hen hawks" by the farmer, and they are considered to be fair game for all, to be shot, trapped, or poisoned whenever seen, for the good of the farm. As a matter of fact, are these hawks poultry-thieves, deserving their bad name? The answer is, no.

* The pictures of hawks in this article are from "The Birds of North America," and are used by kind permission of Mr. Robert Ridgway, one of the authors of that work.

The food of the two species has been most carefully studied, numerous specimens of these two kinds being among the more than a thousand hawks and owls which have been examined by the Agricultural Department at Washington. It would teach a farmer something to note how rarely in the food of the hundreds examined has any trace of poultry, or indeed of any bird, been found.

FIG. 3. ROUGH-LEGGED HAWK.

Naturalists who have noted how frequently these hawks are found near the edges of small ponds and streams and about meadows, are not surprised to learn that, in the spring, frogs and snakes constitute the chief part of their fare, and that at other times the meadow-mouse (*Arvicola*) is their usual food. Others, however, who have never paid any special attention to their habits, will probably be surprised to hear this.

Certainly no one will begrudge the hawks all the frogs they choose to catch; and while snakes are far from useless, they are not favorites with the people, and the thinning out of their number by these hawks will not be at all regretted. As for meadow-mice and such vermin, they are destructive, and though small, yet so rapidly do they increase, and so great are their numbers, that they do the crops very considerable injury —injury which would be a thousandfold greater were it not for the services of these hawks. The mice destroy much grass in summer, and in winter they injure large numbers (sometimes hundreds in a night) of young fruit-trees. Tunneling beneath the snow, they girdle the bark under its cover, so that there is no visible sign of their work until the snow melts. No doubt both these hawks do some damage to poultry, and doubtless both species snatch an occasional rabbit or partridge, but so heavy of wing and clumsy are they, that such acts are but rare happenings in their lives. Admitting the worst that can be said against them, however, the occasional mischief they do in this way is made up for, many times over, by their constant warfare against rats, mice, and similar animals.

It is said that when a tiger once tastes human blood, he ever after prefers it to all other food. It is doubtless much the same with a hawk, whether of the species we are now considering or of others to be mentioned. A poultry-yard being once visited, and a taste of chicken secured, the visit is very sure to be repeated. Under such circumstances, surely, the farmer is justified in acting as judge, jury, and executioner of the

FIG. 4. AMERICAN GOSHAWK.

wrong-doer; but, it is to be added, he is hardly justified in declaring war against the whole hawk tribe, and in destroying the innocent and guilty alike.

The Rough-legged Hawk (Fig. 3) is another large species, a little larger than either of the others, and even heavier on the wing. Breeding further north, he visits New England and the Middle States chiefly in fall and winter. Doubtless he is often mistaken for his cousins, and called a "hen hawk." At all events, he is usually

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DWELLERS IN THE MARSHES

A Snipe Family

(From mounted specimens.)

Mallard Duck (*Anas Boschas*)
American Golden Plover (*Charadrius Dominicus*)
Green-Winged Teal (*Anas Carolinensis*)
Woodcock (*Philohola Minor*)
Greater Yell
Spruce Grouse (*Derdragapus Canadensis*)
Blue-Winged Teal (*Anas Discors*)
Canvasback Duck (*Aythya Vallisneria*)

Ring-Necked Pheasant (*Phasianus Torquatus*)

Wood Duck (*Aix Sponsa*)

Wilson's Snipe (*Gallinago Media*)

ıipe (*Totanus Melanoleucus*)

Ruffed Grouse (*Bonasa Umbellus*)

Quail (*Colinus Virginianus*)

King Rail (*Rallus Elegans*)

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NEST OF THE RUFFED GROUSE (COMMONLY CALLED "PARTRIDGE"),
HIDDEN IN THICK GRASSES

shot on sight; if for no other reason than because of his fierce looks. And truly, with his heavy hooked bill and cruel-looking claws, he would seem to be dangerous enough to the poultry. Yet, notwithstanding his size and strength, he, too, is equipped for no more daring raid than an attack on a defenseless frog or snake, or the slaying of meadow-mice. Of the last this hawk consumes a great number,—probably all but a twentieth of his food consists of them,—while he rarely touches poultry or birds at all.

Very different in appearance and habits from the above species is the goshawk (Fig. 4) or, as he is commonly styled in northern New England, the "blue hen-hawk." Of rather slender build, when full-grown a hawk of this sort measures from twenty to twenty-four inches in length. It is bluish slate-color above; below, white, crossed with many zigzag slate-colored lines. Though more numerous in the mountains of the far West and in the British possessions, the goshawk is not uncommon in our northernmost States in fall and winter, and occasionally even builds its nests in that region. It is a bird that loves the woods, and is oftener met in the shade of the dense pine and spruce woods than any other hawk. For strength and bravery, this hawk is not surpassed by any bird of prey.

It feeds upon ducks, pigeons, hares, grouse, and poultry. It is the type of a true hunting-falcon, flying rapidly a few feet above the ground, and descending with a swift rush on the luckless prey detected by its sharp eyes. It is daring to rashness, and unlucky is the farmer whose poultry-yard becomes familiar ground to one of these hawks. Almost before the frightened fowls have had time to sound the alarm, it has selected and seized its victim, and is away more quickly than the gun can be snatched from its corner.

Audubon once saw one of these falcons rush

FIG. 5. DUCK-HAWK, OR PEREGRINE FALCON.

upon a flock of the birds called grackles as they were crossing the Ohio River. The birds in their fright collected into a compact mass, the hawk dashed among them, and, seizing first one and then another, killed five before the flock could escape to the woods on the further bank.

A closely related European species was one of the falconers' favorites in the old days, and was

FIG. 6. BROAD-WINGED HAWK.

used in hunting hares, pheasants, partridges, teal, doves, and crows. Doubtless our own goshawk could readily be trained to hunt game, but of course the falconers' days are practically over, though it is said a few falcons are still trained in England.

The American Peregrine Falcon or Duck-Hawk (Fig. 5) is another notable species, though one in which the farmer takes less interest, both because it is a rather uncommon bird, and because it is found chiefly on the seashore and the banks of rivers.

Like the goshawk, the duck-hawk is dark blue above, while the white under parts are barred and streaked with black. It is more compactly built than the goshawk, and is smaller, being only about seventeen inches long. Unlike most other hawks, it rarely or never builds in trees, but places its nest on lonely and inaccessible ledges in the mountains or on cliffs by the sea.

Though smaller than the preceding, the duck-hawk is in no wise inferior to it in prowess and strength of wing. It attacks any bird that is not larger than a mallard duck. It has been known even to kill and eat the sparrow-hawk. Its favorite food, nevertheless, seems to be water-fowl; and I have more than once seen it in pursuit of them far out at sea—a flight of fifty or even a

hundred miles being but pastime to this fierce wanderer. It often proves its barbarity by killing more than it needs for food, apparently just for the pleasure of the hunt. Confident of its power of flight, the duck-hawk makes no attempt to conceal itself, but boldly starting the game, pursues it until it closes with its victim and bears it struggling to the ground.

While out one day on a little stream near Tucson, Arizona, I heard a loud quacking, and presently I saw a mallard duck coming toward me at a tremendous pace, hotly pursued by a

FIG. 7. MARSH-HAWK.

duck-hawk. Though pressing forward for dear life, the duck's outcries told of its distress, and it evidently felt that escape was impossible. The greater danger blinded it to the lesser,—or was it sagacity that prompted it to fly straight to me? At all events, its trust in man saved its life; for when the hawk had come almost within gunshot, the fear of man overcame appetite, and it gave up the chase in disgust, while the duck sought safer quarters.

The gunners know this hawk well, and many a duck that the hunter has laid low falls to the share of this robber of the air. The European peregrine, which ours much resembles, formerly played an important part in falconry, and became the pet of kings and nobles, and it was the female of this species that was called the "gentil" or "gentle falcon." Herons were the principal game hunted with this bird, and he who knew not "a hawk from a hernshaw," as Hamlet says, was regarded as ignorant indeed. The favorite time for the sport was when the herons were passing from the heronry to the ponds after food, or upon their return in the evening, especially if the herons had to fly against the wind.

When a couple of hawks were flown at a heron, the latter at once threw out any food he happened to have, "to lighten ballast," as a sailor would say, and endeavored to mount in air so as to give the hawks no chance to strike him from above; and thus all three ascended in a series of spirals. When one of the falcons reached an advantageous point above, he immediately endeavored to close with the heron, and if he missed, the other took a turn. When one of them finally seized the heron, his companion "bound" to him, as it was termed, and the three descended lightly to the ground, the hawks breaking the fall with outstretched wings.

In days past, this falcon was carefully protected by man for his sport, and severe penalties were visited upon any one who molested or destroyed it. We live now, however, in more prosaic days; and, noble bird though it be, few claims to mercy can be urged in favor of the peregrine falcon. Its food consists largely of useful birds, and its talons are against every creature it can master.

Fig. 6.—The Broad-winged Hawk, though smaller than most of the foregoing, is still a large bird, an old male hawk measuring somewhere from thirteen to fifteen inches from tip of bill to end of tail, while the female measures from sixteen to eighteen inches. It may be said that, as a rule among birds of prey, the female is always considerably the larger. As their strength is according to size, it is supposed that its larger size enables the female to provide better for her family; though the male, however, lends his best assistance. Now as to their food. Most people will admit that our broad-wing has a just claim upon gratitude, when they know that its chosen bill-of-fare includes snakes, toads, and frogs, but not many mice, and very few birds of any sort. It is, moreover, very fond of the larvæ (or caterpillars) of the big night-flying moths.

Fig. 7.—The Marsh-Hawk, also, has a broad expanse of wing, and is, perhaps, from its peculiar habits, much easier to know than any of our large hawks. His long tail and slim body with its white rump, and his habit of "beating" lightly, but not swiftly, over meadows and fields, just above the tops of the grass, cause him to be readily recognized. He sometimes trespasses by snatching a sparrow or lark, but the food he prefers, and that upon which he chiefly lives, is mice, ground squirrels, and such little gnawers. No impudent raider of the hennery is he, but a living mouse-trap, and so carefully does he quarter and beat over his hunting-ground that he is called the "marsh-harrier." His family connections, however, give him a bad name, his good deeds are forgotten, and many a harrier thus falls victim to the ignorant crusade against the whole hawk tribe, or to the thoughtlessness of the sportsman to whom a wing shot is a temptation not to be resisted.

FIG. 8. COOPER'S HAWK.

There are many other large hawks scattered over the United States, but the above are the ones oftenest found in the eastern section of our country. As will be seen, they are, with two exceptions, really useful to farmers, feeding upon creatures that for the most part are certainly useless and injurious to man, while the harm they do the poultry and game is so slight as to scarcely weigh in the balance against them. The two injurious species, besides being uncommon, may readily be known from the others.

Passing now to what we may call the small hawks, let us glance at the two most important, —important by reason of size and misdeeds: the Cooper's and Sharp-shinned Hawks.

Fig. 8.—The old male Cooper's Hawk is from 14 to 17 inches long; the female 18 to 20 inches. Fig. 9.—The male Sharp-shinned Hawk, a miniature of the last-named, measures from 10 to 11½ inches, while the female measures 12½ to 14 inches. Size, however, does not count for much in the matter of hawk effectiveness, and the two rascals now on trial before us, though small, are remarkable for speed and impudence. Woe betide the flock of small birds that attracts the attention of one of these winged bullets! Possessing speed and courage in the highest degree, they search along hedge-rows and copses, pass in graceful flight among the orchard trees, and follow their winding paths through tangled brush and vine, with the hope of surprising some luckless sparrow, dove, or quail. The terrified bird tries to fly, or, better, to dodge into some friendly brush pile or thorny patch. The hawk instantly pursues; and fortunate indeed is the fugitive he has once started if it escape the clutch of his sharp talons. Well have both these rascals earned the name "chicken-hawk," for both of them are true hardened thieves of the barn-yard, and do not hesitate to snatch a pullet from under the very nose of the irate farmer—and even to return in the afternoon of the same day to repeat the robbery.

Little can be said in their favor, but so sudden are their attacks and so rapid their flight, either in charge or retreat, that only now and then do they come to grief, while their sins are visited on their larger, more honest, and more stupid relatives.

I am sure that hawks enjoy bullying weaker birds, and that not infrequently they chase them about, so as to enjoy their fright and discomfi-

ture, when they do not mean to prey upon them. I have seen a Cooper's hawk pursue a raven, and evidently consider the chase a huge joke, and I have seen other hawks enjoying the same sort of fun.

Fig. 10.—The Pigeon Hawk, so called from its size and bluish color, makes a fit comrade of the other two. Though no less destructive to bird-life, since it is smaller it must necessarily prey upon smaller birds; and the poultry-yards are usually free from its visits unless, indeed, a yard contains young chickens. It is a beautiful hawk, but its presence in a neighborhood is a constant danger to everything it dares to attack.

FIG. 9. SHARP-SHINNED HAWK.

Fig. 11.—The Sparrow Hawk, our smallest hawk and the most abundant of its tribe, is certainly a very valuable ally to the farmer. When it can obtain them, grasshoppers are its favorite food, and it rarely eats anything else. When these are not to be had, it captures mice and small birds, many more of the former than of the latter. The destruction of grasshoppers means little in the East, but in the far West, in the regions of the grasshopper plague, it means much; and the number of the winged pests destroyed by the sparrow hawk is not easily reckoned.

Notwithstanding this fact, the State of Colorado passed a law, some years ago, offering a bounty on hawks, owls, and various animals, and vast numbers of sparrow and other hawks were sacrificed and paid for by the State, because the hawks of other species were supposed to be guilty of stealing poultry. The sparrow hawk when captured young is readily tamed, and makes a gentle and interesting pet, perching upon the hand, readily recognizing its friends, and becoming quite friendly.

FIG. 10. PIGEON-HAWK.

The West contains another hawk, of large size, the Swainson's Hawk, which also appears to live entirely upon grasshoppers in their season. It seems remarkable that birds of such powerful build and provided with such talons should be fitted out so formidably for the destruction of a humble insect prey!

The time may come when some of the Western States will be glad to buy back the aid of these winged friends of the farmer at twice the price now paid for their destruction.

For the sake of its curious food, I will call attention to the remarkable Everglade Kite of Florida. It feeds almost entirely upon a kind of large snail. The talons of this kite are long, and curved just enough to enable it to grasp the globular shell, while the long, abruptly hooked mandible is admirably fitted to extract the contents. Wonderfully sharp eyes these hawks must have, for I never was able to find one of these mollusks alive in the Everglade marshes, yet the hawks have no trouble to find all they want, judging from the number of empty shells.

FIG. 11. AMERICAN SPARROW HAWK.

H. W. HENSHAW.

ANIMAL FIGHTERS AND HUNTING STORIES

AN OPEN TRAIL

BY FRANK STICK

It has been said somewhere that every complete animal biography must end in a tragedy; but I doubt if this broad statement would have held good regarding the Black Bears of Lakeland.

From what I learned concerning them, during a long residence in the North Country, the only enemies they seemed to fear were men, and if they had only known it, the inhabitants of those parts really considered them most desirable as neighbors. You see, it was these people's occupation to take care of the city folk in search of recreation, who tarried at their lodgings, and the sight of a real wild bear would richly compensate these town-bred folk for days and weeks of rather poor angling. As few strangers came into those parts excepting the peaceably inclined city people, the bears were in little danger, even from mankind.

After all, it is possible that the animals got a certain amount of amusement from these visitors. We know a bear's inquisitiveness is highly developed. And as a man was reasonably sure to be winded or sighted, long before he had any knowledge of the bear's whereabouts, what an easy matter it was for them to scuttle noiselessly through the brush, and from a vantage-point to the rear of some log or rock safely to contemplate the actions of the queer two-legged animal.

For the entire summer that marked the cubhood of the young members of a certain bear family, my home was a comfortable "A" tent, pitched in a sheltering cluster of pines and hemlocks. From the front door one could cast a "spoon"—slap!—on the bosom of Shicraboga Lake, and through the tiny window in the rear I could see high above me, an eagle's nest on the brow of the big hill, called by the Indians "Long Look."

That summer I had very little to do in the way of duty, and months of sunshine in which to do it. So at odd times, I struck up a sort of one-sided acquaintance with Mrs. Bear and her children. It could scarcely have been called a close acquaintance, for, until weeks passed, I never came nearer to the entire family than some two hundred feet. However, binoculars worked such magic on this occasion as to enable me to imagine myself removing a fat cockle-bur that adorned Madam Bruin's left ear; and with the aid of the glasses and by studying their tracks and the signs left by them in their travels, I learned almost as much concerning

the habits of these animals as from watching them with my own eyes.

My first meeting with the bears occurred while paddling home from fishing one evening—at the hour of yellow sunset and purple silhouettes. As I rounded a wooded point, the canoe sliding softly through the still water, I saw the family on the beach some seventy-five yards distant. The mother bear had lifted a huge log that must have weighed nearly half a ton, and with it balanced in her arms, was telling her cubs—in bear language—to stand from under. The little creatures, intent on the good things entombed in the rotten wood, were dancing and tumbling around beneath, in great danger of being flattened into fur mats.

Seizing an opportune moment, the mother allowed the log to crash to the sand. My! How the cubs did poke their little black noses and slender tongues into every crevice and wormhole, and how they did slap and tear the soft wood, and growl and smack their pursed-up lips over the larvæ and insects that rewarded their efforts.

Unheeded, the canoe had drifted against a scraggy, half-submerged log, from whose dangerous embrace I freed it with a couple of strokes of the paddle. When I glanced up, the beach before me was perfectly bare of animal life. There was not a glimpse of the big bear or the little ones. I rubbed my unbelieving eyes, and looked and looked, but not a sign of any bear could be seen. Nothing but the broken log, and—when I came to examine the beach more closely—numberless tracks, to prove it was not a dream. Not even a distinct sound from the bears' quick scramble for cover had disturbed the evening quiet, though later I fancied I could remember the echo of a grunt from the old one.

On a Sunday, while gathering a mess of raspberries along a bush-smothered foot-path, I noticed a black speck high on the slope of the Long Look. Focusing the binoculars, an old black bear came into my field of vision. Lower on the hill I spied a cub, then another, and later, still another walked into view. Like myself they were berrying, and had evidently happened on a windfall.

Mother Bear gathered the ruby-burdened bushes to her with both arms and was licking the fruit into her champing jaws as eagerly as though thorns were unknown.

The baby bears, at somewhat of a disadvantage by reason of their short stature, still managed very well indeed. The favorite method employed by them when the berries were too high to be easily reached, lay in bending the bushes to the ground by waddling over them

One could not but envy the cubs their perfect enjoyment of the feast. Seemingly, they had not a single care. No thought beyond keeping little round bodies filled to bursting with the good things so bountifully supplied all about them. Yet, underlying this seeming peace and content, the very foundation of an animal's existence, lay the great fear; the fear of mankind, to which every other instinct takes second place. Every other instinct, did I say? Let me retract this statement, for there is a greater something, but whether an instinct or a thought, no man knows. As strongly it comes to the bird as to the beast. Ay, as strongly to the she-bear, for all we know, as to any other mother; for "mother-love" we call it.

Often as the old bear fed, that day on the Long Look, she would rise high among the bushes, her forepaws hanging close at her sides, and with twitching nostrils would search the atmosphere for any hint of danger—turning her keen eyes to the mountains first, and then to the country of lakes and pine groves below her. After a bit, still feeding, the family moved out of my sight around an elbow of the hill.

Several weeks after this, as I flipped breakfast flapjacks in front of my tent, an old Indian, a friend whom I had not seen for many days, came up from the landing—striding flat-footed and noiselessly in his moccasined feet—and grunted a greeting:

"How?"

"How?" I answered, without looking up from my labors. And this was the extent of our conversation, till later,—our breakfast disposed of,—he asked for whisky.

"No!"

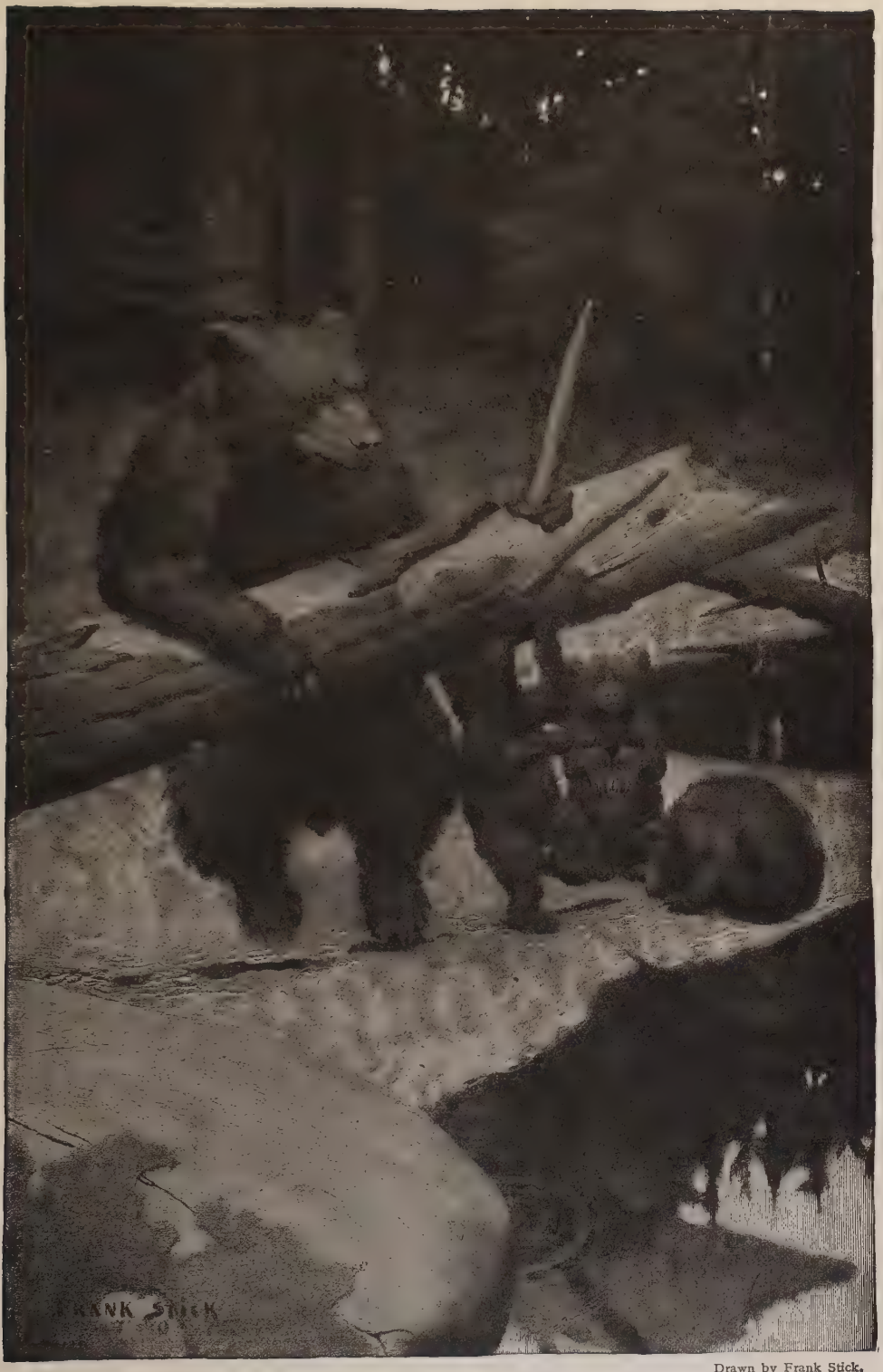
"Got tobac?" was his next query, in a disappointed tone.

Yes, I had tobacco, plenty of it; and I gave him a goodly supply.

His silence disappeared somewhat under the cheer of the smoking, and, because I questioned him concerning them, he talked to me about bears.

Yes, he had killed several; a half dozen, maybe; but none of late years. The last killing had happened several winters back, when he found the trail of a big she-bear in the snow, and had followed it thirty, forty miles to a shallow den under a shelf of rock she had chosen for her winter sleep. This was pure luck, he thought. He had once met with an old bear and her two cubs in a berry patch. The big one ran and the cubs climbed a burnt pine, but he shinned up after them.

It seems the mother bear returned, searching for her offspring, and made considerable disturbance. Old Buckskin showed me four claw



Drawn by Frank Stick.

"THE MOTHER BEAR HAD LIFTED A HUGE LOG AND WAS TELLING HER CUBS TO STAND FROM UNDER."

marks on his shoulder, one of them reaching to his waist. She had hit him twice, sending him head over heels into a snaggy windfall, where he lay till she left with her young.

In his entire experience he had never known of a bear doing battle with a man unless it was a mother bear with cubs. He considered them shyer beasts than foxes, lynx or deer—more difficult to hunt than any other animal.

Many truths he told me of the woods; things not generally found in natural histories, nor yet in new nature libraries; and, later in the day, he took the trail for a little lumbering town eighteen miles distant.

One day I shouldered my canoe along an ancient lumber road, bound for a small river of hard-fighting bass and whopping muskalonge. In the big timber, things appeared in a half gloom, though the sun shone fervidly in the open. Here and there, where its rays filtered fitfully through the lesser interlacing of branches above the winding roadway, lay warm, irregular spots of yellow. The canoe resting upon my neck and shoulders, hid from my view objects to the right and left of me, but in front the trail was open, as all trails should be. The day smelled fresh and fragrant with the growing of green things. Through the deep forest lay the penetrating silence of a big cathedral; only the high strain of insects to make the silence felt the more.

As we sometimes suddenly become aware of a far-off sound of music that creeps but slowly into our thoughts, I became aware of a new voice in the forest stillness. Rather a faint confusion of many small voices; more piercing, though of less volume than the note of any instrument. Now, if I had been a grade higher in the school of woodcraft, I should, no doubt, have dropped my canoe and crept forward to investigate, for I recognized the sound as coming from a swarm of bees, fighting mad. A few yards farther, as I rounded a turn in the road the whole comedy was before me.

My bear family of the lake shore and the berry patch were about to dine. Not standing out in bold relief from the surrounding cover, as a domestic animal would have appeared, but rather mellowing and merging into it, almost a part of the inanimate things of nature, they seemed. Mother Bear was clawing eagerly at a jagged rent in the trunk of a tall maple, from which issued a storming army of bees, intent on protecting their treasure of honey. In front, and nearer to me, the three cubs waited in eager expectation, their attention somewhat disturbed by the little warriors who harassed them.

As I looked, one of the youngsters tumbled backward with a squeal of rage, where he rolled into a growth of ferns—a fat, animated muff—rubbing his nose vigorously the while.

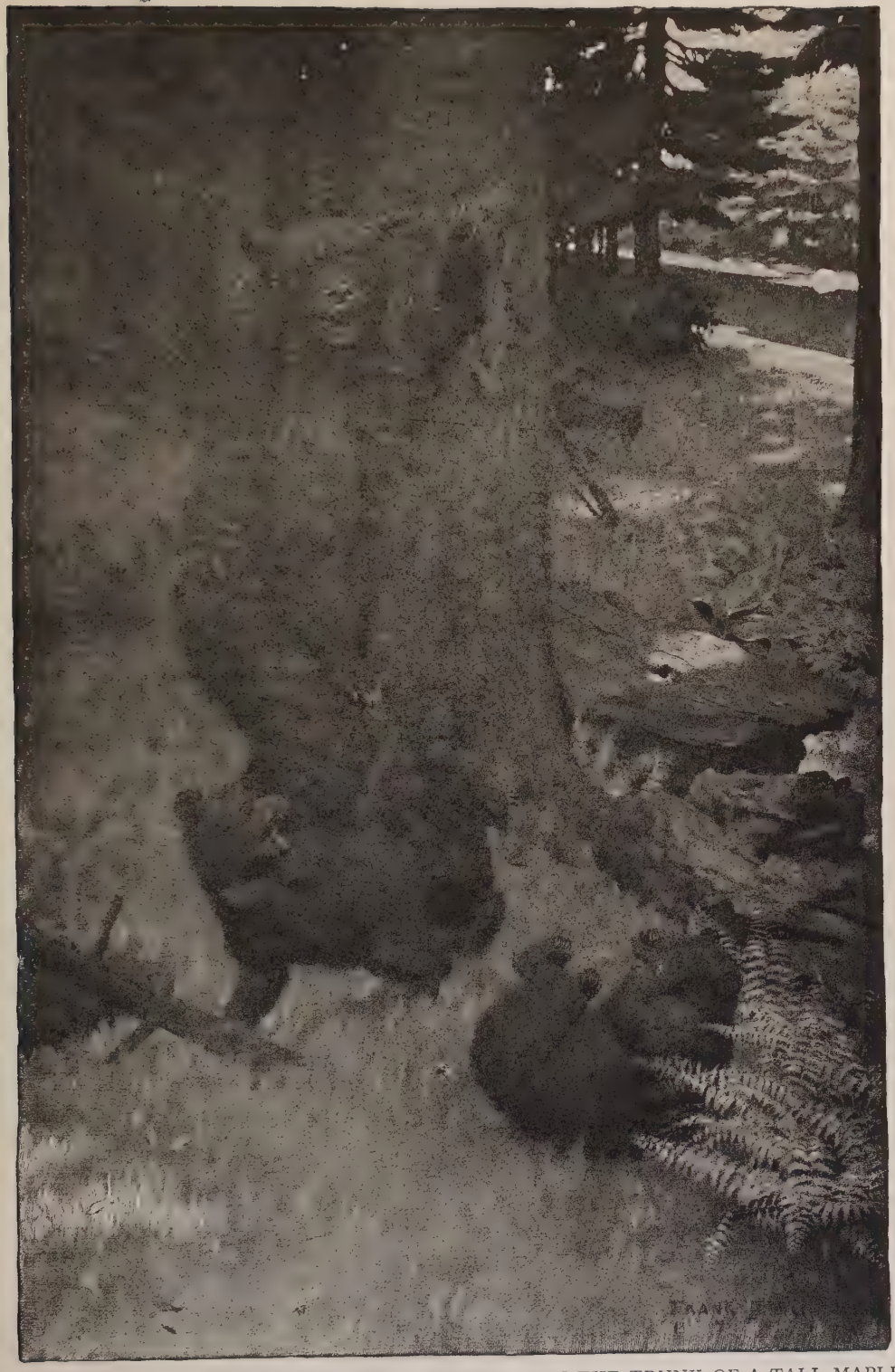
Things happened rapidly after this. The she-bear somehow became aware of my presence—though she could scarce have winded me in the stillness—and whirled around on her hind legs, snarling. I must have made a strange and startling appearance, with the canoe overtopping me by four feet, the prow curving downward like the beak of some huge bird. At any rate, one look was enough, and with an earnest command to her usually obedient family, she disappeared in the brush, two cubs trailing close behind, and poor little Bear-of-the-Sting completely forgotten by her in the rush; but not by me. Oh, no! Within a few yards of the youngster, he saw me coming, through his pain, and made off down the road, yelling his fear huskily. As I took after him, something hot and stingy—like the dart from a blow gun—hit me on the cheek, and another above my right eye. A hot cinder crept up my sleeve and stayed there, burning. Yet these stings I scarcely noticed, in the joy of the chase.

The cub was cornered for a moment by the river, but the sight of me sent him splashing into the water. Ten feet from shore I caught him and smothered him in the depths of a flannel shirt to stop his raging. I carried him home with me.

Arrived at camp—of course the fishing was given up for the day—I coupled together two strong chain stringers and with a length of rope fastened Master Bear to a young birch. Then, after rubbing the swellings on his and my own face with mud and soda, I tried, with little success, to make his acquaintance. All that day he sulked under a stunted fir-tree, and refused to eat or drink. Even maple syrup, and that rich concoction, locally known as "spotted puppy" tempted him not at all.

Next morning the tin in which I had offered the food was licked clean—whether by the cub or the thievish pine squirrels that awakened me each morning, I could not tell. That day I tried to make friends with him, and the day following and each succeeding day; but no, my advances were in vain. This was a strange cub indeed, for usually they can be tamed easily.

Often at night I heard him whining and worrying at his tether, and at times, he would burst into a long "y-a-a-a!" of grief; an evil thing for any young animal. He was losing flesh rapidly. All the plumpness of his body was gone, his nose grew dry and scaly, and even his coat became dry and lusterless,—always a sign of ill health in furry creatures.



"SHE WAS CLAWING EAGERLY AT A JAGGED RENT IN THE TRUNK OF A TALL MAPLE, FROM WHICH ISSUED A STORMY ARMY OF BEES."

The eighth day after the incident of the bees, I was awakened some time after midnight, by a most direful wailing from my captive. I lay and listened for some time, loth to leave the comfort of my blankets. Then inquisitiveness getting the better of my lazy drowsiness, I crept to the front of the tent, unlaced the flap and looked out.

The cub had crawled up the birch as far as possible, and, grasping a branch with his fore-paws, half hanging, half clinging to the trunk, was calling mournfully. At intervals as I listened, from far up above on the Long Look, came an answering note, but so faint and far away it was, I could not be sure of the nature of the animal that called—it was somewhat like, yet unlike, the drawn-out, grating bark of a fox. The cub, with his keener sense of sound, no doubt read its meaning aright. This animal, whatever it was, at least was free, and he was in chains.

Closer to us were other sounds, soft voices of the night, full of content. The light wind that rustled and whispered through the trees; bull-frogs, rumbling bass on the lake shore; peepers, joining their high trebles, plainly audible, a musk-rat's gnawing, and the plash of a mink or some venturesome fish in the shallows. From the northern horizon, reaching high above the soft silhouette of pines, with moving points and streamers of light, the aurora borealis blazed and played incessantly, dimming the stars with its luster.

I remembered another captive I had known in a distant city. A young student, a "country mouse," who, searching for knowledge, had strayed from pleasant places and lay for months marooned in the heart of a great metropolis. And I remembered how he longed, with a ceaseless craving—as it must have been with the cub—for the scenes of his heart's desire. Not but that there were oases of beauty in that prison of his, for the parks were fair to look upon, and free to all who cared to enter. But the parks were surrounded by rusty brick buildings, and by chimneys that belched out black smoke. Even the church spires were dingy, and the tinsel on them was tarnished. Inside the parks were iron posts and chains, and even guards with clubs. Only at night, when mantling darkness hid smoke-stacks and buildings, would he sometimes slink into the depths of the bushes, and lying there, imagine the artificial lights reflected on the clouds were the northern lights of his distant home.

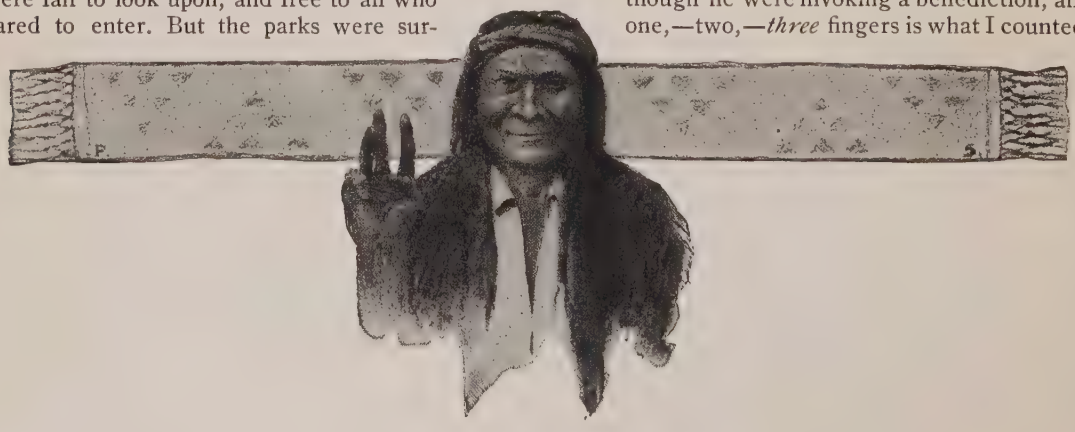
That night the trail up the Long Look was plain before me, and more easily traveled than I had ever found it before, even in the brightest sunlight. I took the cub some miles up the slope of Long Look and set him free.

Since that night, I have seen neither mother bear nor her young, for my long vacation came to an end shortly following the night when the cub and I went up the trail together.

As I stood by the box-car station, waiting for the train that was to carry me back again to the big city, my friend Buckskin approached to give me his good-by and good luck, and we fell into conversation. All too soon my train came rumbling in, and I climbed aboard and made myself comfortable in a double seat. Then I raised the window that we might continue our talk.

"All aboard!" sounded, and the drive wheels of the little engine shrieked in the sand as we slowly started. As a fitting climax—knowing how interested I was in the animals (I have no doubt, the Indian kept quiet about it till the last moment), he casually mentioned seeing the family of bears on the big hill, the day before.

"The cubs!" I shouted, half out of the window in my excitement,—"how many cubs?" Then a perfect calm settled over me, for my last sight of Buckskin showed him standing stoically on the tiny platform, his hand raised before him almost as though he were invoking a benediction, and one,—two,—*three* fingers is what I counted.



HUNTING THE PUMA

BY CLARENCE EDWIN BOOTH GROSSMANN

(*Illustrated by the Author*)

I

He was born many years ago, away up in the Lost River Mountains, on the northern boundary of Idaho. For miles around stretched the rolling mesas; in the north the peaks of the Salmon River Mountains rose high, cutting, as it were, into the blue expanse above; while beyond, a faint white outline marked the distant snow-peaks of the Rocky Mountains. Such was the sight that met four sleepy little eyes one warm April day. Now, cub-cougars are always cute little things, just as young kittens are; but when, about a week after they are born, they open their eyes to the great world about them, they are the brightest, dearest, cunningest little animals on the face of the earth. And "Puma" and his brother were no exceptions to the rule; at least, so thought Mother Cougar as she watched them stretch their tired bodies and look out on the wonderful sight which was now disclosed to them.

Such happiness as there was in that rocky den which was the home that Mother Cougar had selected for her young ones! From morning till night the little fellows lay out in the warm sunshine, now and again scampering about over the rocks or clawing and biting each other in play, reveling in the pleasure of strong and healthy bodies, and in the very feeling of being alive.

"MOTHER COUGAR UTTERED A SCREAM."

And so they lived at peace far up in a secluded part of the mountains, with never a care to trouble them; for did they not have a good, kind mother, who protected and fed them, and when they were weaned, did she not bring home fine, luscious hares and gophers for them to eat? Therefore they played and were happy. But this could not go on forever, and Mother Cougar knew it; for in days to come, when they no longer had a mother to feed and care for them, they must know where and how to stalk the wary deer, how to spring straight and swift as a thunderbolt on the unsuspecting mountain-sheep, and how to avoid the antlers of the great bull-elk when furious with rage. This was what she must teach them before they were grown; and how at least one of them profited you shall see for yourself.

II

The great sun had set; and as the ruddy glow in the west grew paler, out from the lingering golden light the evening star, that marvelous jewel of God's heaven, shone delicate as a glittering dewdrop, set in a frame of most wonderful color.

Then, far out on the prairie, the sharp bark of a coyote could be heard, and one by one others joined in, each singing that great song of the Western plains, which, once heard, will stir your soul with some unspeakable emotion never to be forgotten.

The warm breeze of this August evening must have carried the sound of the barking coyotes to the den of Mother Cougar and her cubs; for certain it was that at about this time the little fellows began to yawn and open their eyes, for they had been fast asleep most of the day, snuggled up close to their mother. She also began to stretch and yawn, and, rising up, she sniffed the evening air, uttering a low whine.

Nearly four months had passed since Puma and his brother opened their eyes to the world, but the time had not been wasted, for Mother Cougar had spent most of her time in teaching them what she herself had learned by hard experience. There were few cub-cougars who could equal the little fellows in the gentle arts of leaping, fighting, or stalking the shy blue grouse. But there was one experience which they had not as yet had—that of coming face to face with a human being; for, except trappers and Indian hunters,

very few men had at that time invaded the wild country in the north of Idaho.

And so it was that on this summer evening the mother led her little ones down the mountain to give them their first lesson in the ways of mankind. The moon had risen, throwing a silvery light on the surrounding country, and lighting up the way for the cougars.

What a picture they made—the old one picking her way noiselessly among the loose rocks, and the little fellows following excitedly after her! The land became flatter, and soon they were walking on the level ground.

Sage-brush grew on every hand, and tall pines sighed as the cool breeze swayed them gently to and fro.

But presently a subtle odor filled the air. It was something the cubs had never smelled before, and it affected them in a strange way. There was in the smell something pleasing to them, and then again another odor that mingled with the first smell made the hair on their backs stand up, and filled them with a desire to run away.

Then when their mother saw the effect it had on them she led them to the spot where a lot of logs were piled up to make a sort of den, and as they approached the smell grew stronger and worse.

"FOR A FEW SECONDS THERE WAS A TERRIBLE FIGHT."

They fairly shook with mingled fear and excitement.

I don't know what Mother Cougar said, or how she said it, but it is certain that somehow she made the little fellows understand this: "That is a bear-trap; it is made by *man,* and though it may smell good, it is of evil ways and means death!"

So, in their early youth, was the hatred for mankind instilled in their minds.

III

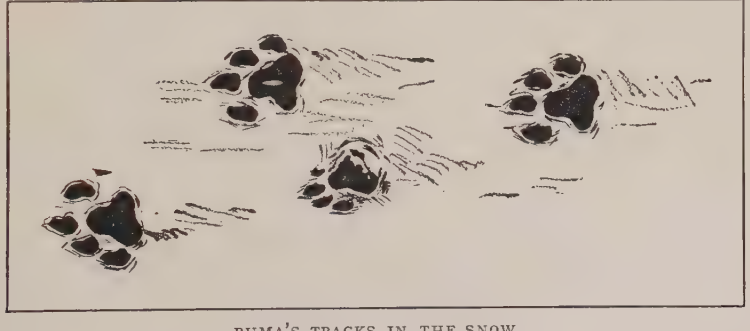
THE "survival of the fittest," a law among wild animals, accounts for most of them having about the same amount of intelligence, of course varied according to the scale of animal intellect. But once in a while an animal excels his fellows by superior wisdom, strength, or craft, and becomes a veritable leader of his kind. And it was by a series of occurrences that Puma, the little cub-cougar, grew up to be one of the strongest and wisest of his race.

He always had been remarkably bright, and as he grew older and stronger he became one of the most reckless, fear-inspiring animals that ever played havoc with cattle and sheep, or that ever was suggestive of death to the inhabitants of the small town of Birchcreek.

Several months had passed, and one day, late in November, Mother Cougar was leading her young ones home to their den.

It was a wintry day; the snow covered the ground, and dark clouds were swept across the sky. The little cougars had grown considerably, although Puma's brother had developed some internal trouble which made it hard for him to swallow or to digest food without discomfort, and so he was ailing most of the time.

Just as they were coming around a small hill, a huge grizzly bear loomed up in front of them. At first he did n't see them, but Mother Cougar arched her back and uttered a blood-curdling scream, which was a good enough warning for any animal but a grizzly to change his direction.



PUMA'S TRACKS IN THE SNOW.

The little fellows were fairly frightened to death, and ran back some distance into the woods. But still the grizzly kept on until he got quite near Mother Cougar, and again she uttered that wild scream. She was terribly enraged now, and was prepared to fight if he made another step in the direction of her little ones. The bear raised up on his hind legs and awkwardly continued his way, as though he thought himself more terrifying in that exalted position. But Mother Cougar's fighting blood was up, and she made a couple of bounds and a leap that landed her square on the grizzly's shoulders. She buried her teeth deep in the fleshy folds of his chest, and fell to work with all her twenty claws.

For a few seconds there was a terrible fight, the snow flying in all directions; and the agonized roars of the grizzly were pitiful to hear. But as soon as the bear could shake one arm free, he raised it like a powerful club high in air, and brought it down with one awful crushing blow on Mother Cougar's head.

And that was all. She dropped to the ground limp and lifeless, while the grizzly made the best of his way to the woods, roaring with pain and fury.

The little ones? Well, they were bereft of their one and only friend in the world. They had crept up nearer during the fight, and when they saw her drop lifeless to the ground they ran up to her. But it was all so strange; she was so still and quiet; and they, not knowing what to do, ran whimpering off into the woods.

IV

AND now comes a great blank space in this short history of the life of Puma.

No one knows exactly what happened in the years immediately following the incident just related, except that once he had been seen on a neighboring ranch. Nor does any one know just what happened to the sickly little brother of Puma. It is more than probable that his sickness relieved him of all misery and suffering, and that he fell asleep, never to awake, in the heart of the great Northern woods.

In the winter of 1899 I was one of a party of four men making the best of a vacation by a

Half-tone plate engraved by S. Davis.

THE HOME OF THE PUMA.

short hunting-trip. We had with us guns and ammunition galore, and we were met by our guide at Fort Lemhi, five miles north of the Lemhi Indian Reservation in Idaho. The guide, Johnson, had a pack of splendid hounds, for our game was to be cougars, or mountain-lions, as they are called there.

We put up at the fort for a couple of days before starting on our hunt, and, while there, were surprised to hear many tales concerning a very wild mountain-lion that was the worst enemy the sheep and cattle raisers had known. But all attempts to kill him had proved unsuccessful, for immediately after he had ravaged one part of the country he would disappear, and in a few nights the news would be heard that several sheep or young calves had been killed by him in a settlement twenty miles away. And he did not confine himself to killing cattle, for there was a story which the Indians told of how one wintry night the lion crept into a small outlying camp of the reservation, and sprang upon a sleeping woman, and of how Eagle-track, the husband, took the trail the next morning, and never came back!

But a very singular thing about this mountain-lion was that his left hind foot was slightly deformed, as if it had been crushed, so that his tracks in the snow looked as illustrated on page 45.

When one of the trappers at the fort told us this, a man who was listening jumped up and said: "Now, that 's mighty queer! More 'n three years ago the boys down at our ranch caught a little cub-lion, and, as I come to think on it, he 'd been shot in his left hind leg, and walked sort o' unsteady-like, so we named him the 'Lame Lion'! Wonder ef 't can be the same one as what 's cuttin' up sech a row with the cattle!"

And who could prove that the sheep-killer was aught other than the one-time little cub-cougar who so sadly had been left alone in the world that winter evening long ago?

I shall not go into the details of our hunt, but suffice it to say that we were three long weeks on the trail of the sheep-killer, man-murderer, or shall I call him "Puma"?

For many miles we had followed that singular track through the snow, until at last, as the faint yellow glow in the western sky betokened the approach of another night, we distinctly heard in the quiet wintry air the barking of our hounds, which said as plainly as words: "Treed! treed! The great killer of sheep and cattle and man is treed. The hunt is over!"

And then the little coyotes far out on the snow-covered plain broke the deep silence of the air with their evening song—the same, perhaps, that sang to wake two little cougars some years before in the Lost River Mountains!

BLACK BEAR, MOTHER AND CUBS NEAR THEIR DEN.

THE BATTLE OF THE SURVIVORS

BY FRANK STICK

FAR out in the golden west, beyond the Father of waters and the great plains, snuggled in between two high mountain ranges, lies a great national park. Not an artificial affair intersected with asphalt walks and dotted here and there with threatening "keep off the grass" signs, but a great stretch of virgin mountain, prairie, and forest country, where wild creatures dwell amid natural environments and procure their livelihood in exactly the same way as did their ancestors for generations before them.

There are numberless wonderful things in the park—fountains of boiling water that spout a hundred feet and more into the air (geysers they are called), lakes of bubbling mud, a mountain of glass, and many other marvels; but perhaps the strangest and rarest of all the curious things in the park, are a roving band of shaggy, brown, wild animals, who wander here and there through their domain, waxing fat on the rich herbage and increasing in numbers as the seasons pass.

There are about two hundred of these animals, all told, in this herd, and they are the only really wild buffalo left in our country out of all the millions which, thirty-five years ago, roamed over the western plains from Canada to Mexico. So you can understand why these remaining few are so highly valued.

Their leader is a huge, bulky, battle-scarred old veteran, who rules his tribe with all the bravery and wisdom that a general might display. He is probably the largest buffalo in existence.

Sometimes, though not often,—because grizzlies are not numerous now in the land of the Yellowstone, his people are attacked by these fierce animals and then truly it is a battle of giants.

Some years ago, over in the Jackson's Hole country that borders the Yellowstone Park, a big silver-tip grizzly had taken up his abode, and a particularly bothersome animal he proved himself to be. Scarcely a ranchman in twenty-five square miles but had suffered the loss of certain live stock at one time or another. He had been wounded a dozen times, and as many times he had broken from traps that might have held an ordinary bear. Also several hunters suffered the penalty of rashness.

Then, one spring, the spirit moved him and he ambled over into the Yellowstone country.

The new land was much like the land he had left, only perhaps wild animals were more numerous and tame animals scarcer, and, as every one knows, most wild creatures are warier and wiser than domestic cattle. For some time he was forced to satisfy his appetite principally on a "grazing" diet until one evening, as he wandered along the base of a range of foot-hills, the wind came to him tainted with something akin to cattle smell, so he wheeled sharply and followed his nose up wind out on the broad, rolling prairie.

As he topped a ridge and spied the animals below him, no doubt they looked to him like a herd of domestic cattle. At any rate, he attempted ordinary cow-stalking tactics. It was his wont to creep as close to his quarry as possible and then, with a roar and a rush, to stampede them and strike down one or more of the foolish creatures ere they might get fairly started. A bear is built on compact lines and for a short distance he can make a cannon ball sort of a rush that few animals are able to withstand.

The old buffalo, ever on the alert, discovered him before he had covered fifty feet of the distance between them, and with his dusky head lowered until his beard swept the grass, he gave forth a bellow and charged swiftly through a village of prairie-dogs, the little animals dropping into their burrows as he passed like so many animated tenpins.

The bear stayed his approach, then reared upright to see what sort of a cow this was that dared to meet him. As the old bull rushed upon him Bruin swung back one of those enormous fore-arms that had broken the necks of dozens of steers and cows, and delivered a sweeping blow that, unfortunately for him, reached nothing but the thick padded hump of his opponent's shoulders. At the same instant sharp horns bit deep into his side and he tumbled backward with a squeal of mingled pain and rage. Before he could rise the bull was upon him again, and over he went, once more striking and tearing wildly as he fell. Slash and charge, snapping fangs and tearing, ripping horns, they fought to and fro, till at last the grizzly lay and did not move.

Still the bull gored and trampled his fallen enemy till, wearied, he himself stood panting, and blew the froth and blood from his nostrils. Then he returned to his charges, where they were huddled on the prairie.

Some time, if you happen to be in the Yellowstone Park, you may see the old bull with the deep scars on his shoulders: honorable scars of a battle that proved his valor.

"BEFORE BRUIN COULD RISE THE BULL WAS UPON HIM AGAIN."

MONARCHS OF THE ICE-FLOES

BY FRANK STICK

SINCE the beginning of time, there probably has been enmity between the polar bear and the walrus. Except for the walrus, Bruin's reign over the arctic regions has been almost unchallenged since the race of mammoths passed. All the hardy flesh-eaters that inhabit the bleak, unfertile northland are his natural prey. But most of all he depends upon the seals and sea-lions for his food. There is only one animal that is powerful enough to defend itself and offspring against the polar bear's attack—the huge and cumbrous walrus; but its movements are so slow and awkward when out of the water that often it is impossible for the bulky animal to retard the swift attack and retreat of its smaller opponent.

They are both brave and fearless animals, however, eager in defense of their cubs and puppies; and often when Bruin is out-flanked, or when the bears hunt in pairs, fierce battles rage over the capture of a young walrus.

A full-grown walrus will weigh as much as two thousand pounds; a mountainous mass of muscle and blubber. He is armed with tusks of ivory, sometimes two feet in length, and when from his upreared bulk these formidable weapons are plunged downward upon an enemy, they are as resistless as the drop of a guillotine. Such a thick layer of blubber lies under the skin that he is practically clad in an armor impervious to teeth and claws alike. So, unless the bear is greatly favored by luck, he has little chance to overthrow his antagonist.

The walrus's tusks have other humbler and far more valuable uses than those they are put to in warfare. With these useful implements the walrus delves into the mud and sand of the ocean's bed in search of the crustaceans, seaweeds and other deep-water foods that go to form his diet. Hooked over the edge of the ice they aid him materially in scrambling onto the floes and ice-packs. Stories are told of boats being overturned by these same tusks when the occupants were foolhardy enough to attack the droves of walrus during their migration. All in all they are good-natured enough if left in peace, but most dangerous antagonists when aroused.

Time was when they were almost as numerous as seals in the far north. Walrus blubber was the principal diet of many tribes of Eskimos for years and years,—until trade was opened up with the white man, in fact, when they were killed by hundreds on their breeding grounds, not for food, but only because of the ivory tusks, and the valuable oil extracted from the blubber.

Only a few winters ago an entire tribe of Eskimos passed out of existence, when the droves of walrus on which they had always depended for their sustenance through the long polar night failed to appear in their usual migration.

The big rookeries or gathering places have almost entirely disappeared, and it may be only a few years ere the walrus, as well as the bison, shall become practically an animal of the past.

The polar bear, more adaptable and with a deeper cunning, stands in less danger of extinction, but he will be hunted unceasingly as long as his beautiful robe is in general demand for rugs and garments. Next to the grizzlies these bears of the arctic are the most powerful and the fiercest of their family. They hibernate at the beginning of winter, burrowing deep under the snow, where the heat from their bodies hollows out a small grotto. There is plenty of rich eating to be had in the spring, however; droves of seals and huge flocks of wild fowl, as the bears feed upon young penguins and ducks.

MONARCHS OF THE ICE-FLOES.

THE MOOSE THAT WAS NOT AFRAID

BY FRANK STICK

THE fag-end of a night on the Rolling Stone. A huge fire of dead pine and birch saplings casting their fitful shadow through the forest. A narrow river flowing slowly into the mist, reflecting in its bosom myriad stars and a gentle glow of firelight. Two men laboring over the spoil of their hunt. The plash of a muskrat or some adventurous mink in the shallows.

We crouched by the logs to smoke a pipe or two and wait for the coming dawn and the paddle homeward.

Old Buckskin, the Indian, spoke up as though I had questioned him. "When I was a boy," he said slowly, "there was plenty moose in this country—big ones, taller than a big man, and with horns wider than I could reach, much wider. We eat moose meat all winter, for they are easy to catch when the snow is deep. They make yards in winter with narrow trails zigzag all over, and they feed from young birches only. I have seen a full-grown moose lean against a tree as thick as a man's leg, and bend it clean over to the snow so he can eat from its top branches, where the tenderest leaves grow.

"One day in late summer, my sistair, who is a twin to me, was walk with me by this same stream. I was small then, mebbe twelve summers, but feel big and strong so any man could feel which is like a boy. When we come to a place where the water is the shape of a snow-shoe frame, I hear something making a big noise below where we stand. We sit down for a while and listen. I think mebbe it was a deer in the water. When we come close to the bank, I look over, and there is a big moose shoulder-deep in the water. He was pulling up lilies by the roots. And often he raise his head from the water and twitch his tail a couple of times, but I hold tight to my sistair's hand, who was afraid, and we keep very quiet and he never see us, and the air was come against us, he never smell us. He put his head in the water again pretty quick and go to eating, and my sistair was scared and want to leave, but I tell her I was a man, and not to fear anything when I was near. We lie close to the grass and watch him for a bit, and then, when he put his head in the water again, I toss a couple little stone at him. They go crack against his horn, and you should see how quick he raises his head up, and blow the water from his mouth—*whoo!* like that—and look all around, with his big ears wagging. We lie still, and then he go to feeding in a minute, but I see his tail jerk a couple times, to show he was mad. When he get still again, I throw a bigger rock that hit him in the neck; but he was too quick for me that time, he was. I see him plunging around in the water, and his nose get thin and his eyes begin to show white, and all along his neck and shoulders the hair stand up stiff.

"I think mebbe he did n't know we are people that all animals are afraid of, so I stand up and wave my arms at him, and tell him to 'march!' as I have scare deer from their feeding. But this fellow just make one big splash in the water and come for us.

"For a minute I was 'mos' scared dead. Then I think quick and see he no can come straight against us, the bank too steep. I see a big root that lean over the edge over the river, so me and my sistair jump down on this and hang tight, and just then Mistair Moose come pounding to the edge, and see us there and rage most awful. He make a big noise in the bushes. We sit there on the root for a long time, and I don't hear him no more, so I climb up and look between the grass, and there he stand under a tree and his eyes all red and mad. He see me too, and jump for me most sudden, but I scramble down in a hurry. I want to keep him quiet as I can, or mebbe he tumble down on us and mash us flat.

"I don't see some way for us to get away, and it getting pretty dark all down Rolling Stone River. After long time I see something like a shadow come floating down the water, and when it come close I see it was a little log. I drop down into the water easy and swim up to it and push it close to the bank. I whisper to my sistair, who no can swim, to drop into the water quiet. She slip down, splash! where it is deep, and go clear under, and when she come up she wave her arms and say: *'Glub! glub!'* like that, and start to go down again; but I grab her and tell her to hold tight to the log, and you bet she did.

"We float a long way sure, and then I push the log to shore, and we go home to my fathair's wigwam. I tell my fathair all about it, and he go for look at moose. But when he get there, the moose had lose himself in a tamarack swamp.

"That moose," Buckskin added, "must be crazy mad for sure to act that way he did."

The northern lights were fading above us, as the old Indian said, almost plaintively: "I wish I was little fellow again and my fathair still had his wigwam on Rolling Stone!"

"'WHEN WE COME CLOSE TO THE BANK, I LOOK OVER, AND THERE IS A BIG MOOSE!'"

HUNTER'S LUCK

BY FRANK STICK

It was the year of the great hunger. A tall, gaunt Indian struggled up the steep slope of Lost Mountain. From cap to moccasins he was clad in heavy furs and the skins of wild animals, but at this high altitude even the furs availed little against the cutting blast. When at rare intervals he paused for a breathing spell and to search the white landscape for signs of game he shook and trembled, for he was very weak from want of food. Far below in the valley between the mountains, his squaw and children awaited his homecoming, and in the wigwam there was nothing to eat but a few strips of green buckskin.

After a while his tired limbs doubled beneath him and he sank down into the snow. He thought there was little use in prolonging this struggle, for the mountain-sheep that at one time had been so plentiful in the region seemed to have disappeared with the rest of the animals. Better to stop now before his strength was entirely exhausted, he thought, and after a while perhaps he could return and fight it out to the end with the others down there in the wigwam. As his gaze wandered over the mountain side suddenly his eyes lighted upon two black dots high above him. He rolled over upon his stomach and watched them eagerly, his chin propped upon his two fists. He knew at once they were the creatures he had been in search of, for no animal but a mountain-sheep could scale the almost perpendicular side of the cliff as these animals were doing. To intercept their course and obtain a position from which he would have a chance to bring his bow and arrows into play it was necessary to cross a huge expanse of exposed, snow-covered mountainside. Then all at once he threw himself flat, burrowing under the snow like a frightened rabbit. When he emerged, he was coated from head to foot with the feathery crystals, and at a distance he appeared to be merely another of the numberless snow-capped boulders which protruded from the surface.

Immediately he began to worm himself along the slope, half crawling, half dragging his extended limbs, working gradually higher and higher.

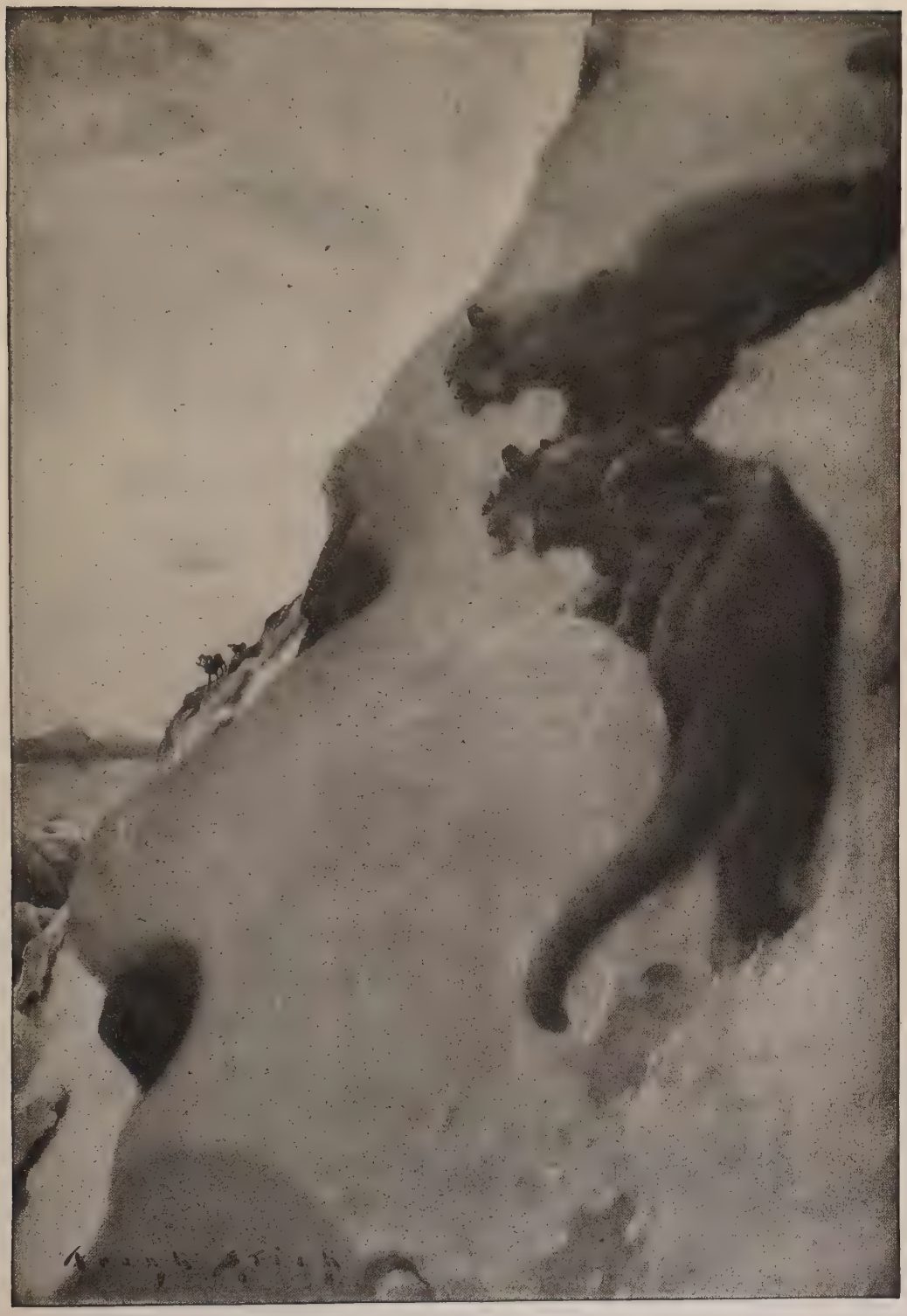
After almost an hour of this labor the Indian found himself in a position some fifty yards below the narrow animal trail the two mountain-sheep were pursuing. Above him reached the sheer face of the cliff; craggy but yet insurmountable. It was still entirely too far for a successful shot with his bow, and unless some whim should cause the sheep to seek a lower level the chances were that his painstaking stalking would prove to have availed him nothing. As he gazed at his quarry his eyes discerned two animals still higher up the mountain. Two tawny mountain-lions were creeping stealthily, yet with considerable speed, along a ridge that intercepted the trail at a point not far from where the Indian crouched.

As he discovered that these lions also were intent on making a meal off the carcass of a sheep, the Indian's heart gave a leap, for it was quite possible, in fleeing from the great cats, one of the animals might approach close enough for him to venture a shot.

So they waited, the two lions above the trail, the Indian below, while their quarry approached with no knowledge of the danger that lay ahead of them. As the sheep rounded an elbow of the cliff, the mountain-lions started from their concealment, covered the space intervening between themselves and their prey in half a dozen low, gliding leaps and were upon them. Surprised as they were and with no chance whatever of escaping by flight along the path by which they had approached, the sheep halted, then, without turning, seemed to deliberately leap into space. Their keen eyes, however, had discovered several projecting rocks thirty feet below. Inadequate though they seemed, they yet afforded a sufficient foothold for the clinging hoofs of the fleeing animals. In this way, bounding from rock to rock with incredible speed, the two sheep safely made their way down the precipitous face of the cliff.

With a snarl of baffled rage one of the cats had halted on the very brink of the precipice. Her mate, more eager to make a kill or unable to stay his rapid charge, shot over the edge and, whirling over and over, clawing at the wall of rock in a futile endeavor to halt his descent, fell at last at the very feet of the red man, where he was transfixed with two feathered shafts.

It did not take the Indian many seconds to loop his sash over the animal's head and set off down the mountain, dragging the carcass behind him. It was a long journey and a perilous one, but it was n't many hours ere he reached the wigwam. You may be sure his squaw and children were made happy by his return, and they soon had the pot over the fire in preparation for a big *potlatch,* which, in Indian language, means a feast.



"AS THE SHEEP ROUNDED AN ELBOW OF THE CLIFF, THE MOUNTAIN-LIONS STARTED FROM THEIR CONCEALMENT."

OUT IN THE BIG-GAME COUNTRY

BY CLARENCE H. ROWE

In the big-game country! Is there a healthy, red-blooded American boy who does not feel a thrill of excitement at the thought? In spite of our civilization, there is, in many, a lingering thrill in the very thought of the chase, handed down through a long line of ancestry dating back to the time when the chase meant food rather than sport.

The stage setting for big game is perfect. In the sheep country of Wyoming or the deer country of Colorado it is at an altitude of from nine to thirteen thousand feet above sea-level, where the air is clear and crisp with the tang of winter, the huge stretches of wild open country lying like a picture at one's feet. Could anything be more beautiful and invigorating?

A reconnoitering-point will sometimes reveal a view of almost a hundred miles. Across a gulch of some twenty miles the distant buttresses of red sandstone rock are painted with slashes of golden copper, the somber pines straggling almost to the top, interwoven with the delicate tracery of the quaking asps, now beautifully colored by the frosts. At our feet nestles a "park" (as the valleys are called), and possibly a silvery thread of water winds in and out. Nature paints with a full, rich palette in this glorious Western country! The skies rival those of Italy in depth, and, while possibly a bit more crude in raw color, are, for this very reason, more in keeping with the broad, vigorous landscape.

In the big-game country everything is big—not only the game, but the mountains, the valleys, and the people. Small natures bred in these surroundings expand and broaden—it is only natural.

All this seems far removed from the subject of elk, Rocky Mountain sheep, and bear, but to every true sportsman these constitute fully one half of the game.

The Rocky Mountain sheep are by far the most majestic and dignified of the animals of this locality. They are fond of the rock-studded mountain-sides, and often a huge sentinel ram, silhouetted against the sky, will reveal the feeding-place of a group of ewes and lambs. The task now, if one is fortunate enough to be to the windward of him, is, after tethering your horse, to work slowly and carefully to within range, usually from two to four hundred yards. Distances out there are most deceptive, owing to the clear, rarefied air, and an object that seems to be a few hundred yards distant may prove to be almost a mile.

Elk come next, and the lucky hungry hunter who has bagged his "six-point" buck would need more space than at my command to tell how he did it.

Antelope surpass both sheep and elk for timidity. They are extremely wary and possibly the most difficult of all game to get within range. They are found in the lower and open country.

Underlying all the hopes and expectations in the hunter's mind is the thought of *bear,* and of course first of these stands the grizzly. These are getting scarcer every year, and most of us, if we *must* get a bear, will have to be content with a yearling or a two-year-old black bear. There is no special country for them. As a rule, in the summer and fall they come down in the low parks to feast on the berries. Toward winter they are more likely to be found higher up the slopes. After the first snow an occasional raid on the highest and loneliest ranches is looked upon by Bruin as "the thing." At one of the ranches nestling at the foot of Mount Evans in Colorado, miles away from any other habitation, a rancher put a cow-bell on each of his horses when turned loose, thinking to frighten the bears. Bruin had a penchant for the frisky little colts gamboling about the mountain-side and thought it quite neighborly to chase the whole herd, mares and all, helter-skelter down to the ranch. It was quite common for the rancher to be aroused at night by the clanging of bells and the clatter of hoofs as the horses scampered into the corral.

Sheep, elk, and bear all go above the timber-line. The height of this line varies in different sections; 10,000 to 10,500 feet is an average.

A good wiry horse that is n't gun-shy and will allow packing the game back to camp is a necessity, for often a bag is made too far from camp for a regular pack-animal to bring in.

Above all, in the confusion of getting together the regular camp outfit, don't forget to slip a paper of trout flies and line into the duffle bag. The little streams winding through the parks will reward an hour's casting with half a dozen or so delicious mountain trout running from six to ten inches in length. They are small, but make up in quality and flavor. When the hunt is over, we take our parting look at the grim old mountains, so silent and peaceful, and wend our way back to civilization, happy and humble in the overpowering glory and majesty of what the natives call "God's own country."

IN THE BIG-GAME COUNTRY.

FROM A PAINTING BY CLARENCE H. ROWE.

AN INDIAN VILLAGE

BY JULIAN RALPH

It was just at the western edge of the Canadian prairie, where the Rocky Mountains sixty miles away rose with unsubstantial ruggedness above the horizon, shining in a mild summer sky, as I have heard that icebergs sometimes do, like crystal tipped with mother-of-pearl. The prairie was slightly rolling, as if it were to begin that series of leaps by which, farther on, it rushed upward to meet the mountains. On a rounded hill I saw half a dozen Indian tepees—an encampment. I had often seen tepees from the car windows, but here was my first chance to visit them, to study and to touch them.

"IN ANOTHER SECOND THERE PEERED OUT ABOVE THIS ENVELOPE A REALLY INTERESTING COPPER-COLORED BABY FACE."

Nothing could be more picturesque than the appearance they put on from a distance. Very symmetrical in shape, rounded at the bottom, and terminating with a bunch of poles that suggested a plume at the narrow upper end of each, they were so like all their pictures I had seen, and yet so much prettier, that the sight made my pulses leap with some of the forgotten instincts of boyhood as I almost ran toward them. Some ponies were tethered near by, and solitary figures of Indian men were stalking over the brown grass to or from the tents, and presently I heard the hubbub of barking curs and Indian girls and boys at play. As I came quite near to the little huddle of tents, they took on a reddish hue which made them still prettier. Squaws began to appear, advancing from them with their hands shading their eyes as they scanned me. Then I saw for the first time that by almost each tepee was one of those rude and rustic frames between the poles of which dogs are harnessed, and on which light burdens are dragged from place to place. By one tepee a skin was being dried, tightly stretched upon a framework and standing in the sun.

But for a mission chapel on a neighboring hill and the distant roofs of Calgary nestling beside a shining stream, I might as well have left civilization, so unspoiled by it was this Indian village.

True, the bucks all wore round felt hats such as we see on Chinamen in many of our big cities, but otherwise they were in full and shabby Indian regalia.

Of course the children and women all begged for money; but as I scattered small coin among them, there could be no doubt of my friendliness, and I was quickly made welcome. A half-breed loafing about in the camp made himself serviceable as an interpreter; and when it was explained that I hailed from just as far away as the interpreter could point, and had never seen an Indian camp before, all the liberty of a child was given me.

"PRESENTLY I HEARD THE HUBBUB OF BARKING CURS AND INDIAN GIRLS AND BOYS AT PLAY."

Invited by the interpreter to enter one of the tents, I did so; and there I saw, for the first time, an Indian baby. As I remember it, the tent, which had a circular base, was about eight feet in diameter. In the center were the dead embers of a fire.

By my side, as I squatted down, was a little Indian girl, scraping a buffalo horn with broken glass. Her oval face, olive skin, and large black eyes were sufficient to have made her pretty, if only she had better known the use of soap. Her father sat opposite me, smoking a pipe; his squaw was beading a moccasin by his side. All around the circuit of the tent, as if to close the space between it and the ground, was a circle of blankets and rags; but there was little difference between the rags and the blankets. The tent, so picturesque from a distance, proved to be mere muslin, black at the top from smoke, reddish brown nearer the ground, and literally riddled with holes burned through it by flying sparks from the fire. The buck brought out two or three hunting arrows, which he tried to sell me, and exposed a very ornamental "quirt" (as they call a whip in the prairies), and then the interpreter said something about a "papoose."

Although I saw at a distance several squaws carrying their babies slung in a blanket at their backs, I saw no baby in the tent, and I asked if there was one. He said something to the squaw, and she, quite pleased with the idea that I should like to see her offspring, threw herself forward on her hands and knees, crept over to me, and, reaching behind me, brought out the baby. I had been within an inch of sitting on it! But even when she handed it to me I had no idea that it was a baby. It was rather like a stuffed stocking without any foot. It was a heavy, solid package laced across and across with leather thongs, and about the shape of a big rye loaf. Possessing a general acquaintance with babies, and a liking for them, I still did not know how to hold this one, or which end of the bundle to keep uppermost, or what kind of a thing it was.

All this must have been expressed upon my face, for the mother, with quite a kindly smile

and a not very barbaric laugh, took hold of the end of the stocking-like package while I held it, and, after unloosing the top, turned it down as a man rolls up the bottoms of his trousers, or as one peels a banana. As she began this operation, there emerged from the top of the stocking a little copper-colored cranium with a sparse showing of inky black hair. In another second there peered out above this envelope a really interesting copper-colored baby face. The tiny Indian was alive, for it smiled; but it uttered no sound. It was shown to me with great pride, and then to the interpreter, who demonstrated his familiarity with babies by poking it in the cheek with his clumsy finger. The little baby smiled, but uttered no sound. After holding it for a little while I returned it to the mother. She drew the covering up over the baby's head more loosely than before, and deliberately tossed it back again behind me—not with a rough motion, but as a lady throws her work into her basket.

The little redskin's arms and body and feet were all wrapped firmly in the stocking-like envelope, which was left loose above its shoulders and around its head.

"I SAW AT A DISTANCE SEVERAL SQUAWS CARRYING THEIR BABIES SLUNG IN A BLANKET AT THEIR BACKS."

That is all I know about Indian babies. To the reader's mind it must be quite clear that there is a great deal more for me and him to find out. How a baby done up like a letter in an envelope can manage to breathe is only one of the queries that will suggest themselves to the mind of the average expert in "infantology"; but as I saw no more Indian babies, I cannot answer any of these queries.

THE ADVENTURES OF CHIB

BY HOWARD ANGUS KENNEDY

THERE was once a poor Indian woman who lived among the mountains of the West. One day her husband went to hunt the grizzly bear; but while he was looking for the bear in a dark jungly place the bear sprang out of hiding, and hugged him to death before he could shoot his gun. Then the bear went to the poor woman's wigwam, and tore it down, and carried off the poor woman and her little boy Chib, and kept them prisoners in his great cave in the mountain. They had nothing to eat but the bones that the grizzly bear threw them, and he never let them go out of the cave. All the water they had to drink was from a deep dark pool at the very back of the cave. Whenever the grizzly bear came home without killing a man or a deer, he was very cross, and tried to strike the poor woman, saying it was all her fault; and though she jumped out of the way pretty quick she often got a nasty scratch.

One day when Chib was about seven years old he was lying beside the deep dark pool, looking into the water, and as he looked down he saw another face looking up at him from underneath the water; and as he looked he saw the lips move, and heard a soft, watery, bubbly voice say: "What is the use of a boy that cannot fight for his mother?"

The little boy said, "How could I fight a great grizzly bear?"

The bubbly voice answered, "You can never grow strong by lying still in a cave. You can only grow strong by going out into the world and doing strong things."

"But how can I get out?" said the boy. "The grizzly bear's twelve sons watch all day and all night at the door of the cave."

"Which door?" said the Water Spirit.

"There is only one door," said Chib, "and that goes out on to the hillside, they say, though I never got near enough to see."

The watery voice laughed a bubbly laugh, and said: "I call *this* the door, and you can go out the way I came in." And with that the face vanished.

The little boy ran back to his mother and told her what he had seen and heard. Then she began to cry.

"What are you crying about, mother?" said Chib.

"Because you have got to leave me, my boy," she said.

"I won't," he said.

"But you must," she said. "That must have been the good Water Spirit, because he told you that boys ought to fight for their mothers; you must do whatever he says."

"But how can I go through the water without being drowned?"

"I don't know," said his mother, "but if he said you could, you can. You go back to-morrow and see if he comes again to tell you how."

When night came, in pranced the grizzly bear, shaking with anger. He had not caught a single animal all day. "A pretty life to live," said he, "with nothing but miserable berries and roots for dinner, and more roots and berries for tea."

"I only wish *I* had a few berries and roots to eat," thought the poor woman, but she was so frightened that she only shrank back without a word. This made the bear angrier. "It 's all your fault," he began to cry. "You are a witch! You have bewitched the woods so that the animals have all run away from the valley. You have bewitched the water so that all the fishes have swum out of the river." And he raised himself up on his hind paws to strike her.

Then brave little Chib rushed at him, crying out, "You sha'n't hurt my mother!"

The bear was so surprised that he stood for a moment with his mouth wide open, and his cruel claws raised high in the air—the cruel claws that would tear a boy to pieces in the twinkling of an eye. The mother dragged her son back and pushed him out of the monster's reach, but the bear made a rush after him. Chib dashed back into the cave as fast as his little legs would go, but the grizzly bear had nearly caught him up when—splash! Chib stumbled on the edge of the dark deep pool, and fell into the water.

"I 've got you now," said the grizzly bear, making a grab at him, but the next moment he drew back his dripping claws with a howl. He was a great coward, like most bullies, and the water hurt. "Yow," he cried, "they are killing me! They have stuck my hands full of pins!" and he began to suck his ugly paws and dance with pain.

If it had been common water, like the river there, of course Chib would have been drowned; but he was n't. The Water Spirit was waiting for him, and took him by the hand and swam with him, down and down and down, and out at the back door of the cave. The next thing the little boy knew was that he was sitting on the bank of the river, looking up at the sky, and

winking like anything—he had not been out in the light for six years. If it had been common water his clothes would have been sopping wet—you know what happens every time you fall into the water—but Chib did n't have any clothes except the brown suit he was born in, and that did n't take long to get dry, you may be sure.

As the little boy sat there winking and blinking till his eyes got used to the light, he heard a bubbly voice under his feet, and when he looked down he saw his water friend looking up with a very sad face.

"I wish I could come up into the air like you," said the bubbly voice, "but I can only live in the water. You will have to go through the world yourself and get strong so that you can go back and save your mother and kill the grizzly bear; but if ever you are in trouble, come running to the river and call for me, and I will do what I can to help you."

So little Chib went on his travels down the river-bank, and he had not gone far when he saw a man lifting a great canoe out of the water and starting to carry it along the shore to make a portage.

Don't you know what a portage is? Well, when you are paddling up the river, and come to where the smooth water ends and the river is nothing but rocks and foam, you lift your canoe up and portage it along the shore till you can launch it in smooth water again. Only it takes two to carry a canoe over a portage unless you are very strong; and Chib knew that, though he had never seen a river before, because, you see, he was a little Indian boy and not a little paleface that does n't know anything.

Chib went up to the man, and said, "Let me help you."

The man looked down at him and laughed, but he said: "All right, you take that end and I 'll take the middle."

So they turned the canoe upside down, and the man put his head and shoulders into the middle, and the little boy put his little head and shoulders under one end, and off they marched. At first Chib thought the canoe was dreadfully heavy, but it seemed to get lighter and lighter. At last the man stumbled over a stone, but the canoe did not fall, and the little boy found he was carrying it all by himself. Very soon they came to the smooth water and launched the canoe, and then the man and little Chib paddled on together down the river.

Every now and then the man stopped and went ashore to hunt. First he brought back a beaver, and threw it into the bottom of the canoe; and the next time he stopped, he brought back a mountain sheep, and threw it into the canoe; and then he stopped and went ashore again, and brought back a big bearded goat, and threw it into the canoe; and then he stopped again and shot a blacktail deer and threw it into the canoe. Then they came to more rapids.

"It 's a long portage this time," the man said, "and the canoe is heavily loaded; I wonder how we are going to carry it."

But the little boy just got under the canoe and lifted it right out of the water by himself, and carried it right up on to the shore and tramped away with it—as you would carry a basket of chips on your little curly head.

They went paddling on together till they saw another man, sitting on a great rock by the side of the river, and the man called out to them to stop and see him carry the rock up the hill—he was so strong, and so proud of it. Chib's man shook his head, and said it could n't be done; the rock was too heavy. But Chib jumped ashore and put his back against the rock, and pushed, and pushed, and rolled it up that hill as if it was as light as your football.

The man with the rock was very much taken down, and said: "I never saw such a boy in my life! Let me go with you on your travels."

Away they went, all three of them together, paddling down the stream, though now the canoe was so heavily loaded that the water nearly came in over the edge.

After a time they came to a meadow where there was a wigwam, and they went ashore and looked into the wigwam. There was nobody there but a little sickly child, lying in a heap of blankets on the ground, and when it saw them the child cried out for something to eat. Strong little Chib carried up the goat from the canoe, and lit a fire to cook it for dinner.

When the goat was well cooked, it smelt so good that the child threw off its blankets and rushed at the meat, and gobbled it all down. The two strong men were very much frightened, for they thought it was not a real child at all but a greedy ghost, so they ran away to the canoe, and jumped in, and pushed off to the middle of the river and waited to see what would happen. But Chib ran after them and made them give him the blacktail deer, and carried it up to the wigwam on his shoulders, and lit another fire and cooked the deer. When the meat was cooked, the little imp made a rush to gobble it up as he had gobbled up the goat, but Chib was on the watch, and grabbed him by the arms and tried to throw him down.

It was dreadfully hard work, because the little imp's magic was very strong. They fought and

they wrestled, and they wrestled and they fought, till at last little Chib got the imp down on the ground and held a big stick over him and was going to kill him. But the imp begged very hard for his life, and said: "I have never been beaten before; I did n't think there was anybody so strong as you in the world. How did you get your strength?"

"I 'm sure I don't know," said the little boy.

"Well," said the imp, "now you 've got it, what are you going to do with it?"

"I am going to save my mother from the grizzly bear."

"Ah," said the imp, "then that is how you got it, and no one can take it away from you as long as you don't forget what you are going to do with it. You must be my master, and I have got to come with you and help you all I possibly can."

So little Chib went back to the river, and the imp perched himself on the bow, and they paddled away and away, all four of them, till the river ran into a narrow valley with great high precipices on both sides. Then the men began to shiver; and they said: "Let us go back! This is the terrible valley without an end; we shall never be able to get ashore."

They tried to turn the canoe round and go back, but the river ran so fast that they could n't paddle up the stream; and they could n't stop, so they had to go on. At last the valley widened out into a lake, but still the precipices went towering up from the water to the sky, straight and smooth and dreadfully high.

When they had paddled all round the lake, and found no place to land on, the men said: "We will climb up the cliff and make a rope and let it down to you, and pull you up with the canoe." So they climbed up the cliff, and made a rope of the creepers they found at the top, and let it down; and Chib was going to tie the rope on to the canoe and let them pull him up with it.

"Don't do that," said the imp; "those men are jealous of you because you are stronger than they are; and when they have got you halfway up the cliff they will cut the rope, so that you will fall and be killed."

Then Chib tied a rock on to the end of the rope, instead of the canoe, and shouted to the men to pull. The men began to pull, and they pulled and they pulled till the rock was halfway up the precipice—and then, sure enough, they cut the rope, and the rock fell down with a crash. Then the little boy climbed up the cliff; and when he got to the top, the men fell on their knees and begged for mercy.

Little Chib did n't even hear what they said; he could n't think of anything but the wild raspberries and wild strawberries and blueberries and gooseberries that covered the top of the cliff. The berries were so sweet and juicy that he forgot even his mother and the grizzly bear. He ate and ate till he felt so stupid and weak that he could n't eat any more; and he could n't walk, and he could n't stand up, so he lay down on the top of the cliff and went to sleep.

Then the two strong men rushed upon silly Chib, and tied his arms and his legs together with a rope, and threw him over the cliff into the lake, saying: "Now we sha'n't have a boy for our master any more."

But as soon as Chib fell into the water he came to his senses, and cried out for the good Water Spirit, and the Water Spirit came and nibbled at the rope till he cut it through, and little Chib promised never to forget any more what he had set out to do. Then the Water Spirit dived with him, and swam down, and down, and down, till they came to the hole where the water flowed out of the lake and under the mountain; and they swam in the darkness for three days and three nights, till they came to a place where they saw two stars shining down through the water. Then they swam up, and up, and up, and at last the little boy scrambled out of the deep dark pool into the grizzly bear's cave. The lights that he had seen were his mother's eyes, for she had been watching for him there ever since he set out.

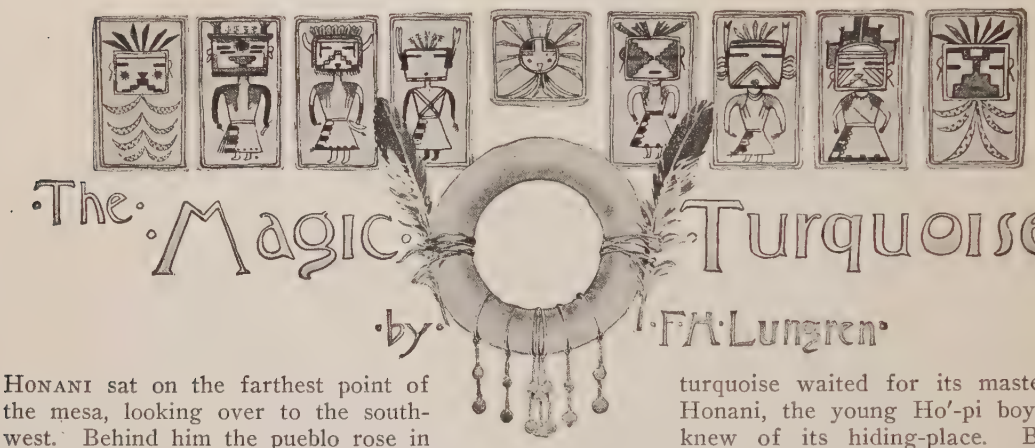
When Chib sat down to tell his mother all about his adventures, he heard a tremendous roar; for the grizzly bear had just come home, and he was angrier than ever.

"Thunder and lightning!" said he, he was so angry, "there is not a beast or a bird or a fish for a hundred miles round! You witch, I brought you here for good luck and you have brought me nothing but bad luck, and I am going to kill you this time!"

Then the monster roared and rushed at the woman; but little Chib dashed in front of her and jumped up and seized the bear's head, snout in one hand and jaw in the other, and tore that great grizzly bear right into two pieces before the wicked old fellow could give him a scratch. When the grizzly bear's twelve sons heard the roaring they came rushing into the cave; and when they saw their father was killed they rushed upon Chib. As he could n't fight them all at once, he ran back to the other end of the cave and jumped into the water. In their rage they jumped in after him, and the good Water Spirit drowned them all in a bunch.

Then little Chib led his mother out of the cave and built a beautiful little lodge of birch-bark for her on the shores of the river. And the little

imp came and made a nest for himself in a sugar-maple tree beside the wigwam, because little imps are very fond of sucking the sweet sap out of the sugar-maples; and the Water Spirit made a water-nest for himself in a deep dark pool of the river close by. And the strong little boy took care of his mother, and hunted for her, while she embroidered goat-skin with porcupine quill; and they lived together as happy as queens and princes till she died.



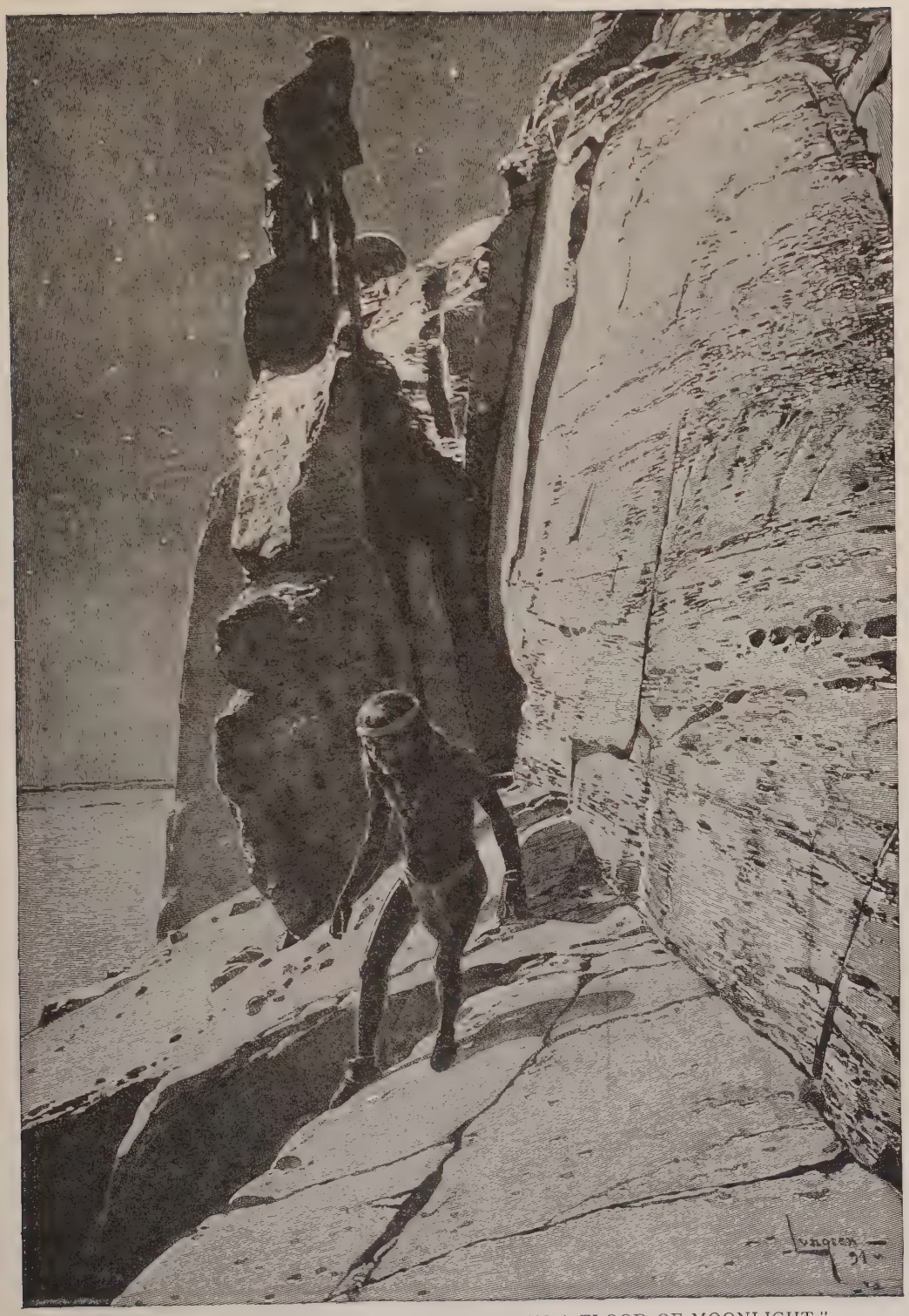
Honani sat on the farthest point of the mesa, looking over to the southwest. Behind him the pueblo rose in terraces of age-worn stone, small-windowed and many-stepped, glaring in the sunlight of an Arizona noon. Hundreds of feet below was the plain, dotted near by with fields of corn and melons shrunken for the want of water. Beyond, it stretched away in endless tawny waves of barrenness until, a hundred miles away, it met the sky at the base of the mighty Nu-vat'-ikyan-obi, the "houses of the snows." Beyond this his sight could not go unless turned to the far-distant cloud specks in the pale blue sky—that sky which in the summer heat seemed to tremble in laughter and mock him; but he knew that far beyond, on the other side of those snow-capped peaks, in a strange country, lay hidden the great sacred turquoise ring—blue like the sky which trembled above, and with hints in its depths of the great green waters the "grandfathers" sometimes whispered of. A man's handbreadth it was, fashioned cunningly from one perfect mass torn from the heavens, it was said, by the great Pa-wa'-quas, or wizards, in the old time, and he who could but touch it would have his wish; and to him who wore it on his breast the future was as one long dream of pleasure, or of great deeds, if so he willed.

This had been told him by old Masi, his great-uncle, before he died from that cruel fall down the dizzy cliff, while Honani brought him water and held his head upon his lap—for they were fast friends, the old man and the young boy. There, far away in the south country, the magic turquoise waited for its master, and Honani, the young Ho'-pi boy, alone knew of its hiding-place. But the great distance; the strange country to be traveled over; the danger from burning thirst amid the countless miles of fierce, hot sands; the gnawing hunger when in the endless pine forest —not to speak of terrible bears and lions, "Honan" and "To-ho'-a,"—were obstacles which loomed higher than the towering peaks of the "houses of the snows."

And still Honani looked and longed. If he could only come to this great talisman, how quickly would all those hardships which seemed to fill his life vanish into thin air! Then would his old mother be well again, his father recover the flocks stolen by the wicked Navajos. Recover? Why, he should have countless ponies and sheep and cattle, and he—Honani—would become a great captain, and would smite the Navajo, the Piute, and the Apache, and all other enemies of his people, until his name would become a power and a blessing in his own land, and a sound of terror to his foes. Then would the grateful rains come in fullness, and where was now a desolation of famine would be a land of plenty. Again would the Ho'-pi-tuh give thanks to "Those above," and the name of Ma'-sau-wâh (Death) would be strange in the houses of the "peaceful people."

How many times he had dreamed these dreams he could not count; and he might have gone on so dreaming had not chance sent Ne-vat'-i of the Eagle clan to taunt him.

"Since how long, my brother, has the badger



"HE STOOD ON THE TERRACE BENEATH, IN A FLOOD OF MOONLIGHT."

(*honani*) taken to the cliff-tops, the eagle's rightful place? Yours is down there, or over yonder"; and he pointed by chance toward the snow-peaks.

Honani wakened from his dream of conquest, and, stung into loss of temper by the contemptuous tone of Ne-vat'-i, the pueblo bully, answered hotly: "Though I be but a badger, have a care lest I undermine the eagle's cliff, and put a ring around his leg!"

Small as was this pebble of thought, it started there and then an avalanche in Honani's mind to defeat and properly humiliate Ne-vat'-i, who, although skilful in all accomplishments of the Indian lad, was boastful and arrogant beyond endurance.

Now, too, after the small stock of corn was gathered, would come those fiercely waged contests of skill and endurance so dear to the heart of the savage boy, making or marring him in the eyes of the people; and this year, Honani knew full well, in all the matches it was really Ne-vat'-i he would be pitted against; and Ne-vat'-i was not of pure Tusayan blood, in truth, but half Navajo, and everybody knew all the Navajos were wizards. Here was a new incentive: he would match magic against magic, and do it with the turquoise ring.

That night he slept but little. Plan after plan came and went, but all of them required his telling his secret, and old Masi had warned him not to. His first plan of waiting until he was older and stronger seemed the only one, after all—in two or three years—but what might not happen in that time? He might be dead—the magic ring be found by another! No! There was but one thing to do—to go, and to go at once.

With the first light of dawn he was about, looking cautiously for food to hide until he was ready to start. All day he hung about the "grandfathers," asking as carelessly as he could questions about the way to the south country, his heart sinking many times at the stories they told of its terrors of thirst, hunger, and evil spirits. Still he resolved to go on and reach the hiding-place; after that, with the magic ring, he would have no fear.

Slowly the sun sank behind the western mesas and was gone. Then all the land was bathed in the wondrous afterglow, more beautiful than any bright sunshine; the flocks were driven up from the purple-shadowed plain to the corrals nestling on the cliff-side; the twilight deepened and then was checked by the great full moon mounting the clear, still sky, and there was peace upon the land.

Honani's plans (if plans they could be called) were to wait until the pueblo was asleep, for they were early people there, and then to steal away, making no noise. The dogs would bark, of course, but that was the way of Indian dogs—to sleep all day and bark all night. Slipping cautiously from his blanket-bed, and half whispering a "good-by" to his little sister lying near the door, he worked his way along in the deep shadows of the houses, past the openings of the ki-vas (underground temples) of the snake and antelope priests, through a little open court, until he stood on the top of the "way of the high place," a dizzy trail or stone ladder, going down, down, almost straight into the black shadow cast by a huge pillar of rock which had separated from the mesa, standing like a giant sentinel guarding the ladder of stone between it and the parent cliff. It was enough to cause a white boy to grow sick with dizzy terror, but to Honani, living all his life upon the mesa, as he hung there between heaven and earth, the greatest fear was the dark shadow, because it was strange, and it seemed like going down in Shi'-pa-pu—the entrance to the underworld. But down he went and, coming from the shadow, stood on the terrace beneath a flood of moonlight that turned the walls of the cliff to silver.

When he reached the plain, six hundred feet below, he took from a clump of bushes his bow and quiver, his throwing-stick shaped like a boomerang, the bag of food, and his earthen canteen. Then, having placed his prayer-sticks carefully, and addressing a fervent petition to "Those above," he turned his face to the "snow-houses."

Behind him the mesa, crowned by the pueblo, towered against the sky like a huge dismasted ship, and over all hung the wonder of the moon.

All that night he walked on, steadily yet fearfully, until the highest peaks of Nu-vat'-ikyan-obi began to reflect palely the first faint flush of the approaching day, growing more and more splendid in glowing rose-tinted snow and deep-blue cañons, as Ta'-wa, the great day-god, waked from his repose in the Ta-wa'-ki (Sun-house) and stepped forward to carry the "shield of light" to his western house.

Who can tell the story of Honani's journey, and tell it truly? Only he can know of the weary way over that riot of color and desolation, volcano-rent and lava-ribbed; that hideous waterless waste of scarred and cinder-strewn graves—the "painted desert." And when he lost himself in the shadows of the mighty "houses of the snows," drinking of their icy springs, there still stretched before him for many a day's journey a trackless forest of giant pines, to that strange "jumping-off" place where the world sinks into a snarled

mass of distorted mountains and cañons, heaped and piled in titanic confusion two thousand feet sheer below the pine-trees on the brink.

Through the mysterious and misleading recesses of the forest he passed, hungry unto death at times, almost overwhelmed by the labor to be done, while the pine branches against the sky waved him ever on and southward. At length he came to where it seemed he could almost look down to the very spot where lay the treasure, if old Masi had not been wrong in his many directions. The shape of certain mountains and cañons convinced him he was right, and that the stream hundreds of feet below him ran past the hiding-place. Down past endless misshapen cedars, gnarled in the most fantastic distortion, plowing through the heavy soil, half tumbling the last fifty feet, until, utterly worn out, he reached the stream-bed. Then he went on, looking ever to his right, for on that side was the hiding-place of the great turquoise ring. So suddenly did he come to the very place told of by Masi, that he shrank back with surprise and superstitious fear.

He had expected to find a ruined house or two, but before his startled eyes stretched a dead city. In a great bend of the stream, and forming a huge amphitheater, the cliffs rose glittering and dazzling white a hundred feet or more, when the stone changed to a soft gray-brown, and went up as high again. Just where the white and brown rock met at the deepest part of the bend, a colossal bite had been taken out of the face of the cliff, forming a great cave. In this space a people, now gone, leaving no record but these silent ruins, had built a most curious and remarkable structure, over five stories high, receding one above the other, until the upper story was far within the shadow of the cave. This was plainly the citadel, or great communal house; for on both sides, following the curve of the white cliff, were the windows and doorways of innumerable cave-dwellings, hollowed from the soft tufa of which it was composed. The central building might have been made only a few years ago by some of Honani's own people, so fresh and new it seemed; but both its position and the caves told of a time long ago, when, without doubt, this was the home of a numerous and prosperous people. In the great bend of the stream had been their fields, and high up, secure from dangers, they had lived, loved, and died.

Now all was dead. The fortress frowned down from its recess, sphinx-like, in the hot, vibrating air; the doors and windows looked, from the face of the white cliff, like eyes from out a skull; and over all brooded a stillness as of death. Over Honani, crouching below, there came a feeling of awe born of fear—nameless, but very real. He was not old enough to have all the fear of a full-grown Indian in the presence of anything connected with death; but the thought that up into the great house hung against the cliff he must go, or forever renounce the turquoise ring, left him so weak and unnerved that the rustle of a lizard in the grass made him start and tremble. How long he remained gazing at that blinding city in the air, he did not know; but the heat forced him to movement. Drawn on, yet afraid, he slowly, with many halts and starts, began to climb the sloping talus, or rubbish, at the foot of the cliff.

To reach the great central mass of buildings he found, on examination, that even to him, rock-bred though he was, the face of the cliff just below the fortress was too hard to climb, and he was forced to approach it by picking his way along the terraces in front of the cave-buildings. It took him a long time to gain a point nearly below the great house; but at last, with torn hands and feet, exhausted in strength, and panting, he drew himself up to the ledge at the base of the wall, and lay there trembling.

Nearly at his hand was a very small door, opening into the lower story of the building. This door, he knew by his own home, did not mean the people who had used it were very small themselves, but made it harder for an enemy to get through in the face of resistance. The room into which he crawled was small and low-ceiled, having a hatchway into the room above, through which the rough ladder still projected.

Old Masi had told him to go to the very topmost room. In this he would find a small stream of water falling into a little basin-like cavity in the floor next to the back wall, and there disappearing into a fissure of the rock. This was the water-supply in case of siege, and Honani thought how lucky that was, instead of having to carry water up hundreds of feet, as at home. In that pool, Masi said, lay the great turquoise. Scrambling up through successive hatchways, he passed rooms with all their contents for living, as when the builders used them. Why they had gone in such an evident hurry, Honani did not question: the magic ring was just beyond. In the dim light of the room up in the funnel of the cave it was hard to see, and he listened for the sound of water; but not the faintest murmur came to his ear. Groping along the entire back wall, he came to a small basin in the rock; but it was dry, and lined with dust. Then his heart stood still, for the cavity was empty. Some one had been before him, and now the ring was lost to him beyond all hope.

He lay down on the floor, his head hot and swirling, his heart heavy as lead. One explanation after another chased through his excited brain. Then he felt angry. Could the story of the magic ring be a dream—the vaporings of a weak old man? And had he come so far, and suffered so much, to find a handful of dust shut in a cell built no one knows how long ago?

Masi must, of course, have been there. His description of the route and place was too vivid for any dream; but the turquoise!—*that* he must have imagined. Perhaps the fierce heat he, too, had just come through, had turned the old man's head. That was possible; but he could not tell.

Worn out and heavy with disappointment, Honani lay down where he was, not daring to eat of the morsel of dried beef he had left, and slept. It was so dark in the little room, and he had been so tired, he did not awaken until a ray of light, coming through the only window opening to the east, fell upon his face. His toilet was simply to put his hair from out his eyes and stand up, and he was "dressed." He lingeringly turned to leave the place of his great disappointment, and as he did so the nearly level beam of light fell full upon the little dry pool, and catching the surface of a mass of rock projecting from the side, caused it to shine and sparkle like a thousand fireflies. It was so pretty, Honani decided to take the crystal along for his little sister Ta-la-on'-ci, in far-off Tusayan, whose eyes were nearly as bright. After a great deal of work, and by good use of his "throwing-stick" as a lever, it came away, a mass half as large as his head, pure white, and sparkling.

Down the ladders, and through the same rooms, he went, his spirits very low, and when he crawled again through the little door he was blinded by the glitter and glare from the cliffs on both sides. The way back to the stream as he had come seemed so long, he decided to return more directly. Tying the white rock by a deerskin thong about his neck, he cautiously let himself down backward from the upper platform, feeling with his toes along the wall for a foothold.

He had gone two thirds down when the treacherous tufa gave way beneath his weight, and down he fell, face to the wall, clutching at everything to save himself, until, bruised and cut, he lay at the bottom of the cliff, with no breath, and, for the moment, very little life left in him. Had he been other than an Indian boy, his fall would have cost him dear. As it was, he was sore and shaken, but not seriously hurt.

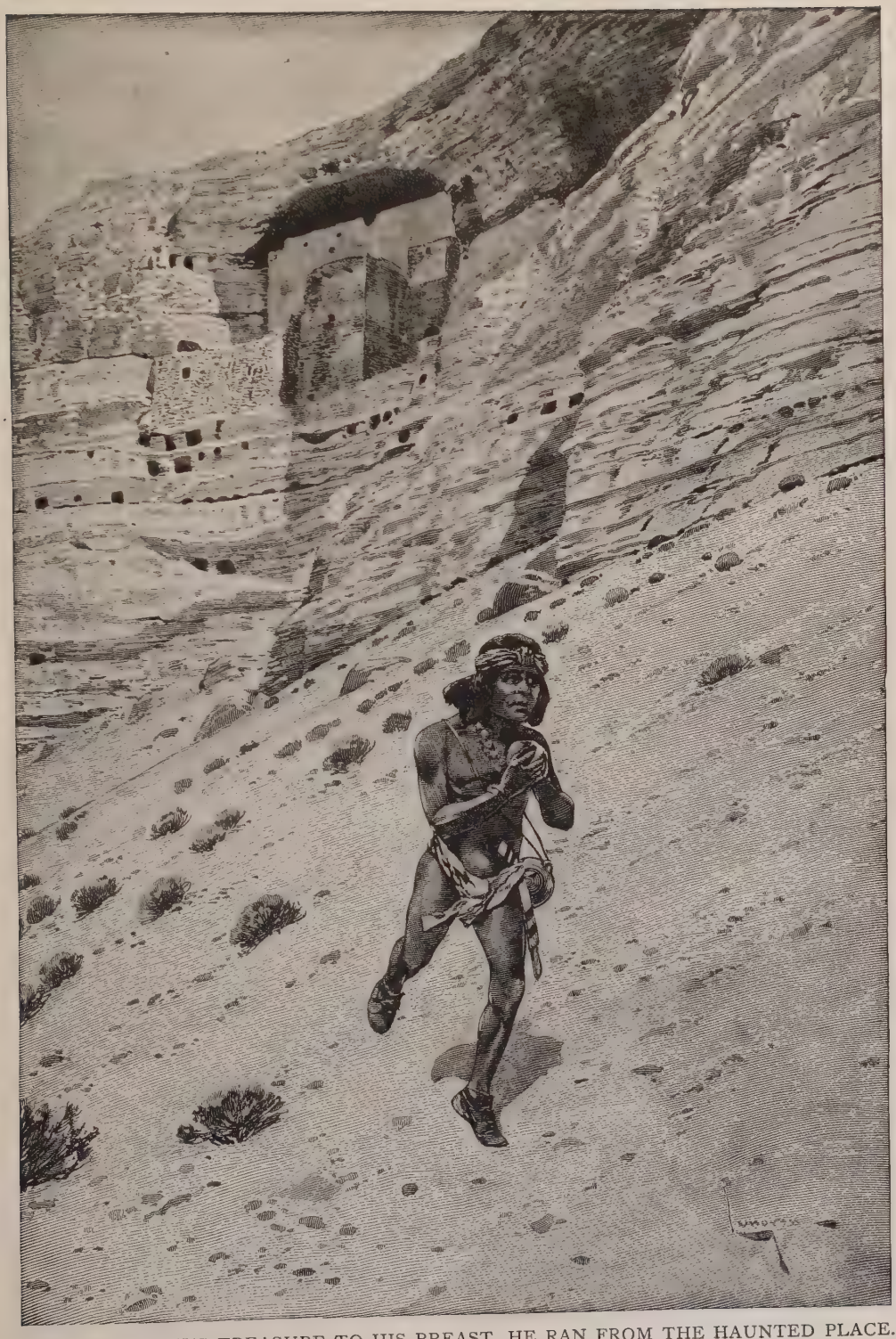
The sun was very hot, and he started for the shade of the bushes along the stream. Then he noticed the white rock was gone from about his neck; the thong was broken or cut by his fall. Not wishing to leave it, he went back, and easily found it by the buckskin thong still tied around it. Lifting it up with a jerk, fully half of it broke away. He could have cried with vexation had he not been an Indian. It was hardly worth carrying away now; the white, glittering crystals were only a shell around a dirty, brown, greasy-feeling bundle, which he idly pulled apart, and then sat down in the glaring sunlight, staring speechless, but open-mouthed, for there in his hand, like a circlet carved from the sky, lay the Great Magic Turquoise Ring!

Honani could not understand. *This* was no dream. The old-time tradition of the wonderful magic ring was true. So Masi was vindicated, and—how cunningly had the old people hidden it, wrapping it in greased deerskin, then placing it in the pool where they knew this particular water would soon cover it with a coating of lime crystals; and the process had continued until it had become like a stony mass completely inclosing the deerskin. Then, through some calamity to the people, the secret was lost to all but a few. Masi had tried, no doubt, to get it; but, with less luck than Honani, had not been attracted by what was to all appearance only a lump of rock. Now he, Honani the Ho'-pi, had it, and he would—

He looked over his shoulder—there in the heat and light glared the dead city, the eye-like windows and doors still gazing at him darkly. Clutching his treasure to his breast, he ran from the haunted place, and did not stop until far on his way to the north. Of his journey back to Tusayan, how he advanced with the rains, how game came to his bow and throwing-stick, of his bathing in a spring in which he could not sink, how he crossed the swollen "Red Water," Pa-la'-bai-ya, and gained his mesa home, is a long story, and Honani said few words. It is told, however, that the harvest that year was plenty through the rains which came with Honani, and that in the games and contests which followed he defeated all comers, even grown men skilled in bow-shooting, running, and jumping.

Ne-vat'-i, the boaster, suffered such an ignominious defeat in two trials that he was dressed like a girl until he could by some new exploit redeem himself.

Then, afterward, when the land was rich in cattle and crops, a fair prize, the fierce Piute came down from the north, like To-ho'-a, the lion, to ravage and kill; and all the fighting men went out against them. Honani led the young men, and stood side by side with the old war-captain. Then when the Piute were driven to



"CLUTCHING HIS TREASURE TO HIS BREAST, HE RAN FROM THE HAUNTED PLACE."

bay, and all killed but two, whom Honani had saved, he sent them back to their own country to tell his message: how he had "eaten up" all their fighting men, and would do the like to any others coming in war against the Ho-pi'-tuh—"the peaceful people."

These things are to be heard if one or two of the oldest grandfathers, once the companions of Honani, can be made to talk to those who, having had their "heads washed" (received tribal baptism), and being their brothers, can be trusted. But the grandfathers are old and wise, and words are like wild birds, which fly beyond your reach and breed many more.

THE WOLF-BOY

BY HOWARD ANGUS KENNEDY

Once upon a time there was a very bad tribe of very bad Indians, and they lived beside the old beaver dams on the Little Snake River. It was n't called the Little Snake River because there were any little snakes in it; but it wound about and about like a little snake itself. There was good corn ground, but the Indians never grew any corn. They were all bad, all except one old man, and when he went away they were all bad, every one, quarreling and fighting among themselves, and stealing everything they could lay their hands on, and killing their friends as well as their enemies.

The good old Indian had two little boys and one little girl. They were too little to be very bad; but their father knew they would get to be just like the rest if they lived in that tribe, so one night he woke them up and told them he was going to take them away. He did n't want any one to follow them or to know where they were going, so he knew he must n't make any tracks on the ground or in the grass, and the only thing you can walk on without leaving a track is water. He came out, and laced up the door of his lodge, and put the big mark on the door that meant he had gone hunting and nobody was to come in till he got back. Then he carried his children down to the river, all three of them, so that there should n't be more than one track in the dust, and he walked backward, and wiped out his own foot-marks as he went. He put his three children and the blankets into his birch-bark canoe; but because the canoe was heavy and the water was shallow, he did n't get in himself, but waded up the river, pulling the canoe behind him.

Up the river he waded, and up and up and up, till it got so shallow he could n't pull the canoe any farther. Then he lifted the children out, and the blankets, and hid the canoe among the bushes that hung over the stream.

The old Indian climbed the hillside, with the blankets in his arms and the baby on his back, and the other boy and girl close behind. At first the old man had to keep bending low and shutting his eyes, because he had to make a new path through the bushes where nobody had ever gone before, and the bushes swished his face; but pretty soon he came upon a wolves' track going up the hill.

"Quiet now, children!" said the old man. And though they 'd been quieter all the time than any white man's children I ever saw, they went so silently up the track that you could n't have heard them any more than if they 'd been going through soft snow in moccasins.

At last they heard a dreadful noise of barking and yelping; and when they came to where the bushes were just going to end and the open mountainside of rocks and grass was going to begin, the old man stopped short, put down the baby, and told the children to hide all together while he went on to see what the matter was.

He lay down on the ground when he came to the edge of the bushes, and peeped out, and saw three wolves fighting. Two of them were grabbing and tearing at the other one, and the other one was grabbing and tearing at them, and they were all tumbling over and over among the rocks. The two wolves would have torn the other one to pieces if they had n't wasted time barking and yelping. The other wolf saved his breath and did nothing but bite. Still, he would have got beaten and eaten in the end, if the old man had n't rushed out with his tomahawk, yelling at the top of his voice, and killed the two wolves before they could run away.

The wolf that was n't killed would have run away too, only he was too much bitten to run fast, so he stayed where he was, panting and bleeding. When he saw that the old man had put the tomahawk back into his belt, the wolf began to crawl up the track; and the old man followed, calling to his son and daughter to bring their little brother and the blankets.

The wolf went crawling up the mountain to a great cliff, and when he came to a hole in the side of the cliff three little wolves came out to meet him, and began licking his wounds.

"I know what this is," said the old Indian to his children. "The mother wolf is dead, and the father has to take care of the young ones—just like ourselves. We won't hurt them, and they won't hurt us."

The baby Indian laughed when he saw the baby wolves, and began patting their soft fur. The father wolf growled a little, but the baby Indian only laughed more and went on playing with the baby wolves; and when the father wolf saw that his young ones liked to be played with he made friends with the little Indian and licked his hands.

So the four Indians and the four wolves lived together in the cave; and the old man and the old wolf went hunting together, so they got plenty of deer-meat; and they shared it together equally, except that the Indians gave all the bones of their own share to the wolves.

Seven years they lived and hunted and ate together. At first the old man went out alone with the old wolf, and the six young ones stayed at home. The little boy played with the little wolves, rolling them over and over among the rocks; they liked being rolled over, when he did it, and never bit him in anger, and when they bit him in play he never cried. But the other children used to pinch the little wolves and pull their hair, so the little wolves bit them in anger, and then there was quarreling and scolding, so that nobody could get any peace.

The little wolves grew much faster than the little Indians, and presently the father wolf took them out and taught them to hunt for themselves.

"You are not big enough to hunt yet," said the old Indian when his elder son begged to go with them; "but you are big enough to be useful. You and your sister can gather pine-branches for our beds in the cave; and you can dig up the ground between the rocks and you can grow corn there—because you are not wolves, and deer-meat is better with corn-meal for men; and your sister can embroider skins with strips of porcupine-quill, because our blankets are worn out, and if we wear skins without embroidery we shall be like wolves ourselves."

But the boy and girl were lazy, and used to play among the rocks till they were tired and then go to sleep; so there was very little corn for any of them. And though they would trap the porcupines they were too lazy to split up the quills, so the skins were never embroidered. Their little brother had nobody to play with, and they often forgot to feed him when he was hungry; and when he cried for food they whipped him, so he had to stay hungry till his father came home with the wolves and the hunting.

When the old Indian got too old to keep up with the wolves, and had to stay at home, his little boy had enough to eat; but the other children were so lazy that the old man had to grow the corn and grind it himself; so the little one still had nobody to play with him. It was harder for the old Indian to make those children do anything than it was to do it himself; and he was glad when the boy got big enough to go off hunting with the wolves. But the wolves were not glad, because the boy used to scold them for not hunting right, though they knew a great deal more about hunting than he did. And if they had n't been afraid of what their wolf-father would do to them when they got home they would have turned on that boy and eaten him in the woods.

At last the time came when the old Indian had to die; and he lay at the door of the cave, and looked at his little boy lying asleep with his head on the old wolf's fur, and called the two big children and said to them:

"My children, I am going to die, and you will have to be father and mother to that little brother of yours. Take good care of him, and teach him to be brave and strong and honest. If you stay here, where the wolves have been so kind to us, be kind to them. If ever you want to go and live among other men, don't on any account go back to the wicked town in the valley that we came from, because in this valley the men are like wolves, though the wolves are like men. But turn your back on the valley and climb over this mountain and go down the other side till you find real men to live with."

Then he died; and the wolves howled for grief. But the son and daughter, when they had buried their father, cared no more about what he had said.

That night the elder brother said to himself: "Why should I live alone here on the mountain with a girl and a baby and a pack of wolves? I will go and live among men; and because it is hard to climb a steep mountain with a girl and a little boy to help, I 'll go by myself. Wolves' company is good enough for them."

So in the morning, when he had gone off hunting with the young wolves and got out of sight of the cave, he said to them: "I 'm going up the mountain to pick wild raspberries; you can go on without me."

They were glad enough to do that, because he had such a bad temper, and he was of very little use in the hunting. So away they ran down into

the forest, and away he climbed up the mountainside. But the mountain was so steep that he soon got tired of climbing. He sat down on the top of a rock and looked over the forest and down the valley, with the river showing white every now and then where it broke in the rapids; and far down the valley he saw the smoke of the town where he was born.

"What 's the use of climbing any longer?" he said to himself. "It 's much easier going down than going up. I will go back to my father's people, and enjoy myself. I will play lacrosse with the tribe and hunt with the hunters, and live in my father's lodge, and get a wife to work for me."

Down he went through the woods, and he found the old birch-bark canoe and paddled lazily down the river till he came to the town where he was born. He pulled the canoe up the bank, and walked into the town till he came to his father's lodge. The mark was still on it, but the door was open and everything his father had left had been stolen.

As he stood at the door, the other Indians came round, and began to jeer at him.

"Here 's the son of old Fly-to-the-Sky," they said, "who did n't think us good enough for him!"

The young man was a coward, and he was ashamed to defend his father. He said:

"My father was foolish to go away; and now that he is dead I have come back, to be wise and stay among my own people."

"That 's right," said they; "come and marry and live among us, and play and steal and kill with us."

So he lived in his father's old lodge, and went playing and hunting and stealing and killing with the rest, and cared nothing for the sister and little brother he had left on the mountain.

Now as soon as she saw that her brother was not coming back, the sister began to get restless; and she got very cross with her little brother, and scolded him all the time for nothing, and ate the best of the meat and gave him the bones to gnaw.

"It is a shame for you to play about here all the day idle," she said. "If I were a boy I would go and hunt, instead of eating what the wolves bring."

"Then give me a bow and arrows," said the little boy, "and I will go and hunt for myself."

His sister wanted to get rid of him, but she was too lazy to make bow and arrows for him; so he made a poor little bow and some poor little arrows for himself, and went off to hunt with the young wolves. Of course he could n't keep up with them, and if they had n't left him behind not one of them would have caught anything. When the little boy got back to the cave he was tired and hungry, and he called out:

"Sister, I have got nothing. When I shot an arrow the birds and the deer laughed at me, because I had never learned to shoot."

But there was no answer; and when he looked into the cave, it was empty. For as soon as he had gone off with the wolves his sister folded her blanket round her and slipped away down the valley till she came to her father's village. And there she lived, and played, and stole, like the rest of the wicked tribe.

When the wolves came home from hunting they found the little Indian looking very glum and miserable.

"What are you miserable about?" said the father wolf.

"Because my brother and sister have gone off and left me," said the boy.

"Why," said the father wolf, "that ought to make you glad instead of sorry—they treated you so badly. It makes *us* glad, I can tell you."

The little Indian could n't help being sorry, no matter how badly his brother and sister had treated him; because they were his brother and sister after all, and not wolves. However, he was very fond of the wolves, and they were very kind to him; and they taught him to hunt, and one of them always stayed behind to keep him company when he could n't keep up with the rest; and they gave him the best of the meat. By and by he stopped thinking of his brother and sister, and almost forgot that he was n't a wolf himself.

One day the elder brother, after living five years in the wicked tribe of his father, happened to go hunting alone up the valley till he came nearly to the cave in the cliff.

"Brother! Brother!" he heard a voice calling away up on the mountainside.

The hunter looked up, and there he saw his little brother, high up among the rocks—only he was not a little brother any longer, but a fine big strapping young Indian.

"Dear me," said the elder brother, "how you have grown! Why not come back with me down the valley and live in our village, and hunt and play and steal with the rest of us?"

So they went down to the village together. But the Indians were cruel to the boy and made fun of him because he used to speak the wolves' language when he was n't thinking, and used to bark like a wolf when they made him angry. They were so unkind to him that after a few days he slipped out of the lodge in the middle of the night, and ran up the valley through the woods,

and climbed up the mountainside, and got to the cave just as the wolves came home from their hunting.

They were all very glad to see him, and he was so glad to get back that he said he would never leave them any more. "Because," he said, "in this valley the men are like wolves and the wolves are like men."

The next year, the elder brother went hunting up the valley again; and when he came near the cave he saw the boy up on the mountainside, not standing upright but crouching on all fours on the top of a rock.

"What are you crouching like a wolf for?" said the hunter.

"I did n't know I was," said his brother, and he stood up on his legs; but he felt so uncomfortable that he dropped on all fours again. "I 'm afraid I 'm becoming a wolf," he said.

Sure enough, when the elder brother looked closer he saw that the young one's legs and arms were thin and hairy and sinewy, and had paws instead of hands and feet. As the hunter stood and looked, his brother's head grew long and pointed and hairy, and at last the boy leaped up into the air and came down a real wolf.

The elder brother ran home as quick as he could, and told his sister; and they said to each other that they were sorry; but they did n't really care, and in a week they forgot all about it. They just went on playing and stealing for the rest of their lives.

THE GREAT SERPENT OF THE HILL

BY HOWARD ANGUS KENNEDY

We will tell you what happened at an Indian town that stood on the top of a hill. The town had a high wall of logs all round it like a ring, and a hundred birch-bark lodges inside; and the hill outside the wall was covered with corn. The hill was on an island in the middle of a deep river. A dreadful giant lived beyond the river, but he could n't get to the island, because the people used to feed the fishes with corn, and if the giant tried to wade through the water the fishes bit him all over and would have pulled him under and drowned him if he had n't gone back where he came from pretty quick. So the people were happy, because there was no one but themselves and the fishes to eat the corn.

One day two little children were playing down by the riverside, and they threw so many stones into the river that they frightened the fishes away.

"Nasty fishes!" said the boy. "Where have they all gone to?"

"Oh, there 's one!" said the girl, "and it 's a new kind."

It was a little silvery snake as long as your hand, with red rings round its body; and it lay on the top of the water with its nose nearly touching the bank and its silvery tail waggling gently behind.

The children picked some corn and held it out to the little snake, and the snake came when they called it, and wriggled up the bank, and ate the corn out of their hands. When it had had enough, it curled itself round a stone and put its head up in the air and began to sing. The children had never heard a snake sing, but all sorts of wonderful things used to happen in those days, so they were n't very much surprised.

"I believe it 's a kind of bird," said the girl.

"Then what 's become of its wings, I should like to know," said the boy.

Then the little snake began to speak; and it spoke as gently as the rustling of a poplar-leaf, so the children were n't at all frightened.

"Yes," said the snake, "I used to have two beautiful silvery wings with red stripes; but the monstrous giant that lives over the river caught me and pulled off my wings, and now I can't fly to catch my food, so I 've come to beg you kind people to feed me."

The children picked up the pretty little bird-snake, and carried it into the town, and made a nest for it in a corner of their own house; and all the people used to come to hear its beautiful singing; and after it had sung it told them dreadful tales of how cruelly the giant had treated it.

Then the people pitied the poor little snake, and promised to give it all the corn it wanted to eat; and they would have promised to go and fight the giant for it, so sweetly did it sing, only the chief stopped them.

"Not so fast," said he. "Not so fast! We don't know yet that it 's telling the truth. I never saw a bird like this before, and I don't see any places on its sides where the wings grew, if they were pulled out."

The little snake had all the corn it wanted to eat, and it grew and grew till in a week it was as long as my two arms stretched out. The children had hard work to carry all the corn it wanted from the field, it ate so much. And it grew and grew till there was no room for it in the house, and it lay outside in the street, and when the sun shone it sang its beautiful songs and made the people cry with its pitiful tales of the giant's cruelty. And it ate so much that the children and their father and mother could n't carry all the corn it wanted from the field, so the neighbors had to come and help. And it grew and grew till it filled the whole street, and when its head lay close to the gate its tail touched the wall on the other side of the town.

It ate so much that the chief gathered a council of all the tribe, outside the wall, and said, "The corn is nearly all gone and the summer is only half through. We shall not have any left for winter if we feed the creature like this. I believe it could feed itself if it liked."

"Yes," said the snake, putting its great head over the wall; "of course I could. I could eat you all up, if I liked; but I am too kind and good to think of such a thing. If the corn is getting used up, go down to the river and catch all the fish you can. I don't mind eating fish, just to make things easy and pleasant for you."

"That would never do," said the chief; "because the fishes are our best friends, and they defend us against your enemy the giant."

"That 's very nice of them," said the serpent, "and I shall be very sorry for them if I have to eat them; but I 'm really afraid it can't be helped, unless you want me to get so hungry I shall have to eat you yourselves, and that would be a greater pity still."

So the people made nets, and went down to the river and caught fish, and brought the fish up the hill to the town; and the serpent put its head out of the gate and gobbled up all the fish at a mouthful.

When the rest of the fish in the river found that their brothers and sisters did n't come back from the town, they were very much frightened; and when they found that nobody came to give them any corn they were very angry; and they turned tail and swam up the river, every one of them. If the giant had come wading through the river then he could have got across all right without so much as a nibble; but he did n't need to, because he 'd got across already!

When the people saw there were no fish left they came and told the chief, and he went with them to where the serpent's monstrous head lay, just outside the gate.

"All the fish have gone," said the chief; "and we can't give you any more corn, because there won't be enough for winter as it is. You are so big and strong, why don't you cross the river and get food for yourself?"

"I wish I could," said the serpent, "just to make things easy and pleasant for you"—and its eyes were streaming with tears—"but I 'm too big and heavy. No; but you are nimble and clever, and you can cross the river and hunt, and you can have half what you catch, if you 're sure to bring me the other half."

"The dreadful giant would kill us," said the chief.

"No, he won't," said the serpent. "The giant has gone away."

"Where has he gone to?" asked the chief; "and how do you know?"

The serpent slid its monstrous head over the ground till it came close to the chief, and then roared out, "Go and hunt, and don't keep me waiting any longer, or it will be the worse for you."

So the chief and his men made rafts and paddled across to the shore. Most of the men trembled when they went into the wood, for fear of meeting the giant. The chief never trembled; and when they got out of sight of the island he called his men round him and said:

"The serpent was quite right when he said we should not meet the giant. He is the giant himself! He could n't get over to attack us while he looked like one, so he made himself look small and gentle, and when the fishes were keeping out of the way of the stones that the children threw into the water, the little snake slipped across without any one noticing; and he could n't have got on to the island then, only the children asked him to; and he would n't have grown so monstrous big if we had n't fed him with the corn."

"What shall we do, then?" said the second chief. "We must go back, because we 've left the women and children in the town."

"Yes," said the chief, "we must go back, and we must take a monstrous big hunting of deer back with us, so as to feed him till he 's heavy and sleepy. Then we must kill him—if we can."

So they hunted all day, and loaded up the rafts with deer, and paddled back to their island. And when they came up through the cornfields they found that the serpent had come right out of the gate, because he was growing so fast there was n't enough room for him inside the town; and there he was, lying in a ring outside the wall, right round the town, with his tail nearly touching his nose. He gobbled down everything the

hunters brought, swallowing a big deer at a mouthful. Then he shut his eyes and went to sleep, and the chief led his men into the town on tiptoe, between the serpent's nose and tail; and the hot breath nearly stifled them as they passed.

As soon as they got safely into their houses they told their wives to pack up everything they could carry and get ready to flee with the children. "Because," said the chief, "if we don't kill him while he 's asleep he 'll lash out and smash the town into pieces with his great body, and we must all run for our lives."

Then the chief gathered all his people together at the gate, and he and his hunters marched out and all shot their arrows together at the serpent's eyes.

The serpent's eyelids were so thick that the arrows just stuck in them without getting through; but they stung him, and he woke up in a bad temper and began gobbling up the people and swallowing them down whole as fast as he could. Some of them ran back into the town; but the serpent drew himself closer together and broke the wall down all round; and closer still, and the houses next the wall were crushed flat as dry leaves when you tread on them. Then the people tried to climb over the serpent's slippery back, but he just shook them off like flies. They did n't want to be squashed flat, so they made a rush to get out between his nose and his tail, and he swallowed them down every one—all except the little boy and girl who had brought him into the town. He would have swallowed them just as greedily as any one else, but when they saw their mother disappear down the red lane they ran back into the ruins of the town.

In the very middle of the town stood a great maple-tree, and the children threw themselves down at its foot. They did n't cry, because they were true little Indians; but they were terribly frightened and they lay as still as if they were dead.

Two little humming-birds used to make that tree their summer-house. The children had often heard them humming and seen them flashing about like green lightning, but this time the birds were not flashing about but sitting still out of sight among the leaves; and they were not humming but talking—at least, the children could understand quite well what they said.

"Where have the people gone to?" said the father humming-bird, who had been away catching flies on the river.

"The great serpent has swallowed them all up," said the mother bird, who had stayed at home.

"The chief and his men were strong hunters," said the father bird.

"But they could n't kill the serpent," said his wife, "it had grown so big."

"They had great bows and sharp arrows."

"But they could n't kill the serpent, its skin was so thick."

Then the leaves of the tree began to rustle. The children had often heard them rustling before without understanding what they meant; but this time they understood quite well.

"The strongest men and the sharpest arrows could not kill the serpent, they had let it grow so big," said the tree; "but there are two little children left, and they can kill it if they try the right way."

"What can they do it with?" said the father bird.

The tree shivered and groaned; but it said—"They must have my topmost twig for an arrow and my lowest root for a bow."

The father bird flew up to the top of the tree and began biting and tugging with his little beak to cut off the topmost twig, and the mother bird flew down and dived into the old fox's deep burrow and began biting and tugging with her little beak to cut off the lowest root. It hurt dreadfully, and the tree groaned and shivered as if a winter storm had struck it; but it let the little birds bite and tug till the twig and the root came off. Then the father bird flew down with the twig in his beak, and the mother bird crept out of the hole, her beautiful green feathers all soiled with the dirt; and the little girl sharpened the twig into a tiny crooked arrow, and her brother made the root into a little crooked bow. They thanked the birds and the tree, and went out to fight the great serpent.

The serpent opened his monstrous jaws to swallow them up; but the little boy drew the bow and shot the arrow, and it stuck in the serpent's neck. The serpent shivered as if he had been stung, and tried to jump up and lash out with his tail, but it was too heavy.

Then a wonderful thing happened. The serpent began to shrivel and shrink, and dried up just like a fallen leaf in the hot sun; and it shriveled and shrank and dried up till it crumbled into pieces like little dry chips and dust; and the people inside woke up, shook off the dust of the serpent, and rubbed their eyes and wondered where they were. As soon as the children saw their mother get up they ran to her and told her what had happened; and she told the chief, and the chief told his people, and they all set to work to build up the town again; and they made a law that no more little serpents were to come into that town, no matter how beautiful they were or what beautiful songs they sang.

KLAMATH JOE'S CAPTIVE

BY CARL LOUIS KINGSBURY

KLAMATH JOE, lifting his head, thatched with long, straight black hair, from its pillow in the grass, rolled over on his stomach, propped his elbows on the ground, and, with his chin in his palms, gazed thoughtfully up at my father. The midday lunch was over and the engineering corps had gone back to work,—all but Father, Joe, and I, for, strange to relate, Joe had worked during the forenoon; hence the utter repose and content of his after-dinner siesta in the grass at the rear of the headquarters cabin.

Father was sitting on a bench beside the door in an attitude that, in any one else, would have been one of dejection. I knew why it was that he was lingering behind after the engineers had gone straggling, somewhat aimlessly, back to work. It had been one of those days when a number of annoying little incidents had followed fast on each other's heels, trying even the elastic patience of the chief. As a starter, Jose Antonio's helper, a raw Swede, whose most pronounced characteristic was a dislike to being told how anything should be done, and a steady habit of doing things wrong, when left to himself, had liberally sprinkled the breakfast supply of beefsteak with soda, under the impression that he was using salt, and there was no time to cook a fresh supply. That was a little thing; it did not matter, except that it was the beginning of a series of small mishaps that had finally culminated in the unpleasant occurrence that resulted in Father's sitting alone, brooding, while the men went afield, to follow their own devices, as far as he was concerned. We were short of men, and when a competent-looking six-footer had presented himself at the headquarters tent the morning before, and asked for employment, Father had been glad to take him on. He had gone out as axman and had worked well all day, but at the beefsteakless breakfast he was missing. These were among the minor vexations. The real trouble was something entirely different. It was because of my knowledge of this, and because I, as well as all the rest, had spent a good deal of time in hunting for a very important little article that was also missing, that I was loitering after the others had gone. I had a vague hope that I might yet be able to help Father in some way, though it was difficult to see in just what way.

But Klamath Joe did not know of the trouble and, as he lay idle in the grass, his glinting eyes turned from his silent survey of Father, to me:

"Yo' fadder look tired," he said, and his tone was distinctly reproachful: "Mos' boys, w'en dey got fadder like w'at he is, was glad to do all he work, and let him res', but yo' "—

"Yes, it sounds well for you to talk about work!" I interrupted angrily. "You worked this forenoon, and that 's the first half-day's work you 've done for the last three weeks"—

"Me? I need new rope; got to have money to git him; got 'nuff now," Joe interposed, serenely making excuse for the brief period of labor to which he had condescended. "As for Father," I was beginning again, when Father forestalled any disclosures on my part by getting up and coming toward us. Joe, who never seemed to listen to anything, and to whose presence, for that reason, no one ever paid the slightest attention, dropped back into the grass, pulled his hat over his eyes, and apparently addressed himself to sleep again. Father seated himself on the log beside me. "Shall I go out to work, Father?" I asked, after a little, as he did not speak.

"No; there 's no use in your doing so. We shall have to go back, I 'm afraid, and do our cañon work all over again, and there 's no object in running the line here any farther until that is done. I let the men go out this afternoon mainly to get them out of the way, although, of course, what is done will be no loss—unless the Stanislau Company gets through a survey of the cañon before we can do it over again."

"And is the whole business a loss, Father, unless we can get through first?"

"Virtually, yes. There 's room for but one line along the river and we had that secured, as I supposed—until my book of field-notes disappeared."

"But there are our stakes along the cañon route; I should think that was enough to establish a prior claim."

"Enough to indicate a prior claim, not to establish it. In order to do that I must be able to show a map of the route. I 've bent all my energies to getting the preparatory work done, leaving the mapping until that was secure. The Stanislau Company have been pushing us hard, but they were hopelessly behind when it came to the cañon, and, if you remember, their engineering force gave up trying to get a route through there when they found the only feasible one taken. But they have been watching us as a cat does a mouse, that I know, and they 'll

KLAMATH JOE MAKES A CAPTURE.

not let the grass grow under their feet when it comes to snapping up that route if we fail in any way to comply with all that the law requires. Our construction gang ought to be at work there now, but they 've only the stakes to go by. Willard is down there at the end of the cañon with teams and men; he can begin work, but the chief engineer of the Stanislau has a right to know, and will probably ask, what he purposes doing. Willard will, naturally, refer him to me, and—I 've nothing to prove my survey. The notes that went with that little red book covered, practically, all of the cañon work. It 's a bad business. It 's quite liable to render all of our work on this survey of no avail. I shall keep on trying, however. We will stay here until to-morrow; if nothing turns up by that time, we will have to go back and make a re-survey of the cañon."

I knew when Father said "if nothing turns up," that he meant if the book was not found, but Klamath Joe did not give me a chance to say anything on that point. Evidently, he had not been asleep. Pulling the old hat from over his face, he turned brightly inquiring eyes on Father:

"Yo' los' him, dat little red book?"

"Yes," Father replied, with an indifferent glance in Joe's direction; "it 's lost."

"Dat little red book w'at yo' carry here"—Joe indicated the locality on his shirt, where his left breast pocket would have been, had he worn a coat—"an' the Transilman w'en he carry it, carry here?" He laid his hand on his hip pocket.

Father smiled, grimly:

"It 's pretty plain that you know the book, Joe. Yes, that 's the one."

"Huh!" Joe grunted, and, with his hat over his eyes, dropped back into the grass.

Father sat beside me on the log, talking, for a half hour longer; then he got up and went into the cabin and I turned to speak to Joe. There was no Joe to be seen. I had been absorbed in the talk with Father, but I knew that Joe must have stolen away very quietly, indeed, to have gone without my knowing it. Certainly, he had a right to go when and where he pleased, but I was wrought up and disturbed over the misfortune that had befallen Father and was by no means inclined to take a reasonable view of the fact that Klamath Joe had had the audacity to be absent from my presence when I desired to speak to him.

"Regular sneak! Crawling off like a coyote and never making a sound!" I reflected wrathfully. Then I recalled that the Indian part of Joe was much given to feasting on whatever odds and ends of food could be procured at unseasonable times—the more unseasonable the time, the better he 'iked it—and though it was a little past noon, Joe would be hungry after his nap—if he had had one.

Accordingly, I made my way over to the cook tent. To my inquiry as to whether Joe had been there, Jose Antonio, the cook, replied with a snort of indignation: "He? Dat misbul half-breed! Not twenty minit' ago, it was, he came to this table and says: 'Bread, meat, quick!' Just like dat! Sometime, mos' days, when he comes hungry an' ask respectiful, I gives him w'at he like, but this time—he orders it. *Orders* it, of me!"

"Well, well, Jose, what then?" I interposed impatiently.

"I tole him, git out, an' he did, but he snatch up whole loaf of bread an' all cole meat I was slice up for supper, and he went away as fas' as he could walk! Me! I was lame, or I would ha' chased him an' got 'em back."

Jose was lame, but if he had not been, I do not believe he could have recovered from the Indian boy anything that the latter had decided that he wished to keep. However, I did not say that to Jose, and he went on angrily:

"Dat Indian t'ief! Dis morning dat Swede spoil the beefsteak"—

"Hold on, there, Jose! Joe is n't a thief, and you know it!"

"W'at you call it, then, w'en he come here an' take my bread an' meat without my permit, hey? W'at you call it?"

"He must not do such things as that, of course. I 'll speak to him about it, and if that does n't do any good I 'll ask Father to speak to him."

"Yo' was better git yo' padre speak at him!" responded Jose, darkly. It was plain that he had no great faith in my powers of persuasion when it came to influencing Joe.

"He laughs at wounds, who never felt their smart." It had been easy enough to take on a tone of superior charity, when it came to reproving Jose for the way that he spoke of Klamath Joe, but it was a different matter—a vastly different matter—when I presently strolled down to the corral to find not only Joe's pony and saddle missing, but mine gone as well.

One of the strictest rules of our camp—and one that did most to preserve the general peace—was that no one was to take another's mount without permission, yet that was what Joe had done with mine; there could be no doubt about it. More angry with him than I had ever been in all the months since he had attached himself to our band of workers, I hurried back to the cabin and gave Father a vivid, wrathful account of

Joe's proceedings. At its conclusion Father looked sympathetic, but not particularly disturbed.

"Queer fellow, Joe," he said thoughtfully. "Don't worry about the horse, Jack. I have an idea that Joe will show up, after a while, with some explanation for his conduct that will make you willing to overlook his taking the horse—although I shall certainly speak to him about that. As for his having *stolen* it, as you suggest, that 's nonsense. Where could he go? Besides that, Klamath Joe is too shrewd an individual—he has too much solid good sense and good feeling, to stoop to such meanness as that!"

That was a good deal for my silent father to say. As I pondered the observation, my anger cooling somewhat, he went on:

"Of course, if Joe does not get back within a reasonable time, we must try to look him up; it ought not to be difficult, I should say. Meanwhile, be patient, and await his explanation."

But the afternoon passed, the evening, the night, with no sign of the missing boy and horses, until it was the middle of the next forenoon and I could see that even Father's faith in Joe was beginning to waver.

As for me, I had ceased to even try to believe any good of him and resolutely turned a deaf ear to the still small voice of conscience which would persist, at every opportunity, in asking what evil I had ever known of him. The notebook, for which we still kept up a steady, anxious search, had not been found, and Father had given orders to break camp preparatory to a return to the south of the cañon that we had so recently surveyed.

The men were all at hand, busily engaged in packing their personal belongings, and I was wondering, bitterly, if Father intended leaving the locality without making an effort to recover my horse—the horse that he knew I loved above all others—when the sound of hoofs down the road, around the shoulder of a low bluff, attracted my attention.

As I looked, the horses broke into a gallop. Klamath Joe, mounted on his own pony, and leading mine, burst into view. But it was at my pony's rider that I, in company with Father and all the men, stared in surprise.

Dusty, begrimed, his hands tied together at his back, his body enwound with a rope and securely lashed to the horse and to the saddle horn, there sat the man who had worked for us one day, as axman, and then had disappeared! His face was a study of rage and pain and helplessness as Joe brought the horses to halt in the midst of the circle. Probably Joe himself was tired and worn, but his countenance gave no hint of such weakness.

"Jack," he said, addressing me first as if to make amends for having taken my pony and saddle, "yo' may please untie this man's han's for him."

Without a word, I at once stepped forward to comply; while Joe, still in the saddle, his competent right hand lightly swinging the noose of his ever-ready lariat, informed his captive, in a tone of gentle warning:

"Yo' make jes' one break an' it 's goin' to be more worse for yo' than w'at it 's been yet."

As I loosed the strong pack-cord that had bound them, the man's hands fell stiffly to his sides, but, with the rope before his eyes, he made no other movement—he had already made acquaintance with the rope.

"Now," said Joe, "yo' han's is free. Yo' han' this White Chief dat little red book w'at you got in yo' coat pocket."

Slowly, stiffly, the man put a trembling hand up to his breast and from the inner pocket of his vest drew forth the missing red book, which he silently held out toward Father. As Father stepped forward to take it, Jose Antonio exclaimed excitedly: "T'ree sheers for Klamas Joe!"

The three cheers were given with laughter and hand-clapping, and Joe so far forgot his dignity as to smile, his white teeth flashing out like an ivory Aurora Borealis, if there is such a thing.

Then he got down from the saddle rather stiffly.

"I t'ink mebbe Jose Antonio goin' give me some breakfas'," he remarked, as his feet touched the ground. He was right. Jose, his face wearing a delighted grin, hurried back into the cook tent, and after I had called one of the stable-men to look after his horse as well as my own, Joe and I immediately followed Jose.

It was worth something to see Jose wait on that Indian boy, while the white man, still captive as to his legs, was placed at another table and allowed to shift for himself, as best he could from whatever the cook deigned to put before him.

After the man had breakfasted—and a very slight breakfast he made of it—Father told me to take off his bonds and let him go free. I did so, and he left the camp without a word.

Father, however, had had a moment's conversation with him, and on my venturing to inquire why he had let the man go, he explained:

"He was hired by the Stanislau Company to do the work that he did—or tried to do. He failed, ignominiously and conspicuously—thanks to our faithful Joe. He is an intelligent man. The remembrance that he will always carry with him of this escapade will be punishment enough."

Later on, several of the engineers tried to wrest from Joe some of the details of his clever

"THE HORSES BROKE INTO A GALLOP."

exploit. But Joe was tired and inclined to sleep after his exertions—particularly, I think, after those at the breakfast-table—and it was not until Father questioned him that he could bring himself to explain:

"How did I know he had dat little red book? Me, I saw him take it. I was layin' under dat bush by the door, watchin' some bluejay w'at got a nest there, an' I see you"—to Father—"take off yo' coat an' hang it up by the door while yo' go to was' yo' face at the bench. Yo' look roun' an' there ain't no soap. Yo' step inside the cabin to git him, an' then, jes' quick, this man steps roun' corner an' puts his han' in yo' pocket and grabs dat little red book, quick, all before yo' come out with dat soap. I not know yo' like him, dat book so well, till I hear yo' talkin' at Jack yest'd'y. I think dat man take it for joke—silly joke, like white mans make at each other—but w'en I hear yo' talk I know w'at for he steal it; I knew he would be hurry down the trail for Stanislau camp. He was. I overtook him fifteen mile straight down the trail; pikin' 'long fas' he was. I see he did n't have a shootin'-gun, so, when he start runnin', I jes' rope him plenty easy by the leg. Then I tie him up good and put him on horse, and we come nearly half way back here. Then it was dark and the horses was tired, so I lifted him offen the saddle an' laid him down beside the trail. Then I picketed out the horses an' went back an' give the man some bread and meat w'at I had with me. I stood over him with the rope while he was eatin' it; then I tied him good again an' then I et myself. Then I went to sleep an' w'en it was morning I put him on pony—had to take your pony—Jack"—

"That was all right, Joe."

—"Yas, I know it was, me. I could n't stop to tell yo' I was goin' take him 'cause there was no time to be los'; can't rope a man so easy after he git into camp—an' then we come on here, an' that 's all."

"Not quite all, Joe," Father said. "You have done me a very great service and I want to make you a present."

We were standing at the back of the cabin and Joe had dropped down into his old place in the grass; he roused himself to glance with languid interest at the twenty-dollar gold piece that Father was holding out to him, but he made no motion toward taking it:

"I got money 'nuff for new rope; that all I want. Money, if yo' have him, make lots trouble take care of him; better yo' don't have him." The last words were a drowsy murmur. Joe was asleep. Father stood for a moment looking down at the faithful Indian.

"Queer fellow, that Joe!" he mused. We turned away; he to work at his notes in the cabin, I to my place in the field, for the order to break camp was, happily, countermanded—thanks to Klamath Joe, who was always expert with the lariat.

A HURON CINDERELLA

BY HOWARD ANGUS KENNEDY

MANY years ago there was an Indian chief who had three daughters; and they lived in a lodge by the side of the Ottawa River—not in a wigwam, mind you, but a good old Huron lodge, like a tunnel, made of two rows of young trees bent into arches and tied together at the top, with walls of birch-bark. Oh! it was an honorable old lodge, with more cracks in the birch-bark than you could count, all patched and smeared with pitch.

The chief had three sons too, but they were killed in a great fight with the Iroquois. When the brave Hurons used up all their arrows they threw down their bows and rushed on the Iroquois with their tomahawks. They screamed and howled like eagles and wolves, and the Iroquois were so frightened that they wanted to run away, but their own magic-man threw a spell upon them, so that they could n't turn round or run, and they had to stand and fight. The Iroquois were cousins of the Hurons, and came of a brave stock; and as the Hurons were few compared to the Iroquois, few as the thumbs compared to the fingers, the Hurons were beaten, and only twenty men of the tribe escaped down the river, and none of the women except the chief's three daughters.

Now the two eldest daughters were very proud, and loved to make a fine show before the young men of the tribe. One day a brave young man came to the lodge and asked the chief to give him a daughter for a wife.

The chief said, "It is not right for me to give my daughter to any but a chief's son." However, he called his eldest daughter and said to her, "This young man wants you for a wife."

The eldest daughter thought in her mind: "I am very handsome, and one day a chief's son will come and ask for me; but my clothes are old and common. I will deceive this young man." So she said to him: "If you want me for your wife, get me a big piece of the fine red cloth that the white men bring to the fort far down the river."

The young man was brave, as we have said, and he took his birch-bark canoe and paddled down the river day after day for seven days, only stopping to paddle up the creeks where the beavers build their dams; and when he stopped at the foot of the great rapids, where the white men lay behind stone walls in fear of the Iroquois, his canoe was deep and heavy with the skins of the beavers. The white men were at war with the Indians, and, though he was no Iroquois, his heart grew cold in his breast. But he did not tremble; he marched in at the water-gate, and the white men were glad to see his beaver-skins, and gave him much red cloth for them; so his heart grew warm again, and he paddled up the river with his riches. Twelve days he paddled, for the current was strong against him; but at last he stood outside the old lodge, and called the chief's eldest daughter to come out and be his wife. When she saw how red was his load, she was glad and sorry—glad because of the cloth, and sorry because of the man.

"But where are the beads?" said she.

"You asked me for no beads," said he.

"Fool!" said she. "Was it ever heard that a chief's daughter married in clothing of plain red cloth? If you want me for your wife, bring me a double handful of the glass beads that the Frenchmen bring from over the sea—red and white and blue and yellow beads!"

So the brave paddled off in his canoe down the river. When he came to the beavers' creeks he found the dams and the lodges, but the beavers were gone. He followed them up the creeks till the water got so shallow that the rocks tore holes in his canoe, and he had to stop and strip fresh birch-bark to mend the holes; but at last he found where the beavers were building their new dams; and he loaded his canoe with their skins, and paddled away and shot over the rapids, and came to the white man's fort. The white men passed their hands over the skins and felt that they were good, and gave him a double handful of beads. Then he paddled up the river, paddling fast and hard, so that when he stood before the old chief's lodge he was very thin.

The eldest daughter came out when he called, and said: "It is a shame for such an ugly man to have a chief's daughter for his wife. You are not a man; you are only the bones of a man, like the poles of the lodge when the bark is stripped away. Come back when you are fat."

Then he went away to his lodge, and ate and slept and ate and slept till he was fat, and he made his face beautiful with red clay and went and called to the chief's daughter to come and marry him. But she called out to him, saying:

"A chief's daughter must have time to embroider her clothes. Come back when I have

made my cloth beautiful with a strip of beadwork a hand's-breadth wide from end to end of the cloth."

But she was very lazy as well as proud, and she took the cloth to her youngest sister, and said: "Embroider a beautiful strip, a hand's-breadth wide, from end to end of the cloth."

Now the chief's youngest daughter was very beautiful; so her sisters were jealous and made her live in the dark corner at the back of the lodge, where no man could see her; but her eyes were very bright, and by the light of her eyes she arranged the beads and sewed them on so that the pattern was like the flowers of the earth and the stars of heaven, it was so beautiful. But when the youngest daughter had fallen asleep at night her eldest sister came softly and took away the cloth and picked off the beads.

In the morning she went to her youngest sister and said, "Show me the work you did yesterday."

And the youngest sister cried, and said, "Truly I worked as well as I could, but some evil one has picked out the beads."

Then her sister scolded her, and pricked her with the needle, and said, "You are lazy! Embroider this cloth, and do it beautifully, or I shall beat you!"

This she did day after day, and whenever the young man came to see if she was dressed for the wedding she showed him the cloth, and it was not finished.

Now there was another brave young man in that village, and he came and asked the chief for his second daughter.

The second daughter was as proud as the first, and said to herself, "One day a great chief's son will come, and I will marry him." But she said to the young man, "If you want me for your wife, you must build me a new lodge, and cover the door of it with a curtain of beaver-skins."

The young man smiled in his heart, for he said to himself, "This is easy; this is child's play." So he built a new lodge, and hung a curtain of beaver-skins over the door.

But when the chief's daughter saw the curtain, she said, "I should be ashamed to live behind a curtain of plain beaver-skins like that! Go and hunt for porcupines, that the curtain may be embroidered with their quills."

So he took his bow and his arrows and went away through the woods to hunt. Twelve days he marched, till he came to the porcupines' country. When the porcupines saw him coming, they ran to meet him, crying out, "Don't kill us! We will give you all the quills that you want." And while he stood doubting, the porcupines turned round, and shot their prickly quills out at him so that they stuck in his body. And the porcupines ran away into hiding before he could shoot.

Then the young man, because he had been gone so long already, did not chase the porcupines, but left the quills sticking in his body and went back to the village, saying to himself, "She will see how brave I am, that I care nothing for the pain of the porcupine-quills."

But when the chief's daughter saw him she only laughed and said:

"You cannot deceive me! It was never heard that a chief's daughter married a man who was not brave. If you were brave, you would have twenty Iroquois scalps hanging from your belt. It is easy to hunt porcupines; go and hunt the Iroquois, that I may embroider the curtain black and white with the porcupine-quills and the Iroquois hair."

Then the young man's heart grew cold; but he took his bow and arrows and went through the woods; and when he came near the Iroquois town he lay down on his face and slipped through the bushes like a snake. When an Iroquois came to hunt in the woods, he shot the Iroquois and took his scalp; and this he did till he had twenty scalps on his belt.

Now all the time that he lay in the bushes by the Iroquois town he ate nothing but wild strawberries, for the blueberries were not yet ripe; so when he came to his own village and called to the chief's second daughter, she said:

"You are an ill-looking man for a chief's daughter to marry. You are like a porcupine-quill yourself. Nevertheless, I am not like my sister, and I will marry you as soon as the curtain is embroidered."

Then she took the curtain of beaver-skin and gave it to her youngest sister, and said:

"Embroider this curtain with quills, black and white, and criss-cross, so that it shall be more beautiful than the red cloth and the beadwork."

So the youngest sister, when she had done her day's work on the cloth, and was tired and ready to sleep, took the quills and the hair and began to embroider the curtain, black and white, in beautiful patterns like the boughs of the trees against the sky, till she could work no longer, and fell asleep with her chin on her breast.

Then her second sister came with her mischievous fingers and picked out all the embroidery of quills and hair, and in the morning came and shook her and waked her, and said, "You are lazy! you are lazy! Embroider this curtain!"

In this way the youngest sister's task was doubled, and she grew thin for want of sleep; yet she was so beautiful, and her eyes shone so

brightly, that her sisters hated her more and more, for they said to themselves, "If a great chief's son comes this way, he will see her eyes shining even in the dark at the back of the lodge."

One day, when the chief looked out of his door, he saw a new lodge standing in the middle of the village, covered with buckskin, and painted round with pictures of wonderful beasts that had never been seen in that country before. There was a fire in front of the lodge, and the haunch of a deer was cooking on the fire. When the chief went and stood and looked in at the door, the lodge was empty, and he said, "Whose can this lodge be?"

Then a voice close by him said, "It is the lodge of a chief who is greater than any chief of the Hurons or any chief of the Iroquois."

"Where is he?" asked the old chief.

"I am sitting beside my fire," said the voice; "but you cannot see me, for your eyes are turned inward. No one can see me but the maiden I have come to marry."

"There are no maidens here," said the old chief, "except my daughters."

Then he went back to his lodge, where his two elder daughters were idling in the sun, and told them:

"There is a great chief come to seek a wife in my tribe. His magic is so strong that no one can see him except the maiden whom he chooses to marry."

Then the eldest daughter got up, snatched the red cloth out of her youngest sister's hand, wrapped it round her, smeared red clay over her face, and ran to the new lodge and called to the great chief to come and look at her.

"I am looking at you now," said a voice close beside her, "and you are very ugly; you have been dipping your face in the mud. And you are very lazy, for your embroidery is not finished."

"Great chief," said she, "I will wash the clay from my face, and I will go and finish the embroidery and make a robe fit for a maiden who is to marry the great chief."

Then the voice said, "How can you marry a man you cannot see?"

"Oh," she said, "I can see you as plainly as the lodge and the fire. I can see you quite plainly, sitting beside the fire."

"Then tell me what I am like," said he.

"You are the handsomest of men," she said, "straight of back and brown of skin."

"Go home," said the voice, "and learn to speak truth."

When she came back to the lodge, she flung the red cloth down on the ground without speaking.

Then the old chief said to his second daughter, "Your sister has failed; it must be you that the great chief will marry."

So the second daughter picked up the beaver curtain and flung it round her, and ran to the empty lodge; and, being crafty, she cried aloud as she came near, "Oh! What a handsome chief you are!"

"How do you know I am handsome?" said the voice. "Tell me what clothes I wear."

So she guessed in her mind, and, looking on the painted lodge, she said, "A robe of buckskin, with wonderful animals painted on it."

"Go home," said the voice, "and learn to speak truth."

Then she slunk away home, and squatted on the ground before the lodge, with her chin on her breast.

Now, when the youngest daughter saw that both her sisters had failed, she said to herself, "They tell me I am very thin and ugly, but I will go and try if I can see this great chief." So she pushed aside a corner of the birch-bark, slipped out at the back of the lodge, and stole away to the painted lodge; and there, sitting by his fire on the ground, she saw a wonderful great chief, with skin as white as midwinter snow, dressed in a long robe of red and blue and green and yellow stripes.

He smiled on her as she stood humbly before him, and said, "Tell me now, chief's daughter, what I am like, and what I wear!"

And she said, "Your face is like a cloud in the north when the sun shines bright from the south; and your robe is like the arch in the sky when the sun shines on the rain."

Then he stood up and took her for his wife, and carried her away to live in his own country.

SOME WONDERFUL ELEPHANTS

BY C. F. HOLDER

Probably no animal excites so much wonder and astonishment as the elephant, the largest of living land animals. Its enormous size, its remarkable intelligence, and its great age—even in captivity sometimes reaching to one hundred and thirty years—seem to place it above other animals in popular estimation; and, as shown in the case of the once famous Jumbo, the larger the elephant is the more curiosity and interest does it arouse.

Jumbo, however, was a very small affair when compared with some of the elephants that roamed the earth in earlier times. Even the mammoth, that existed when our forefathers were living in caves and were clothed in skins, could have raised and tossed him high in air; yet the great mammoth itself was a pygmy compared with the huge animals that preceded it, and was, indeed, much smaller than many of the elephants of a still earlier period.

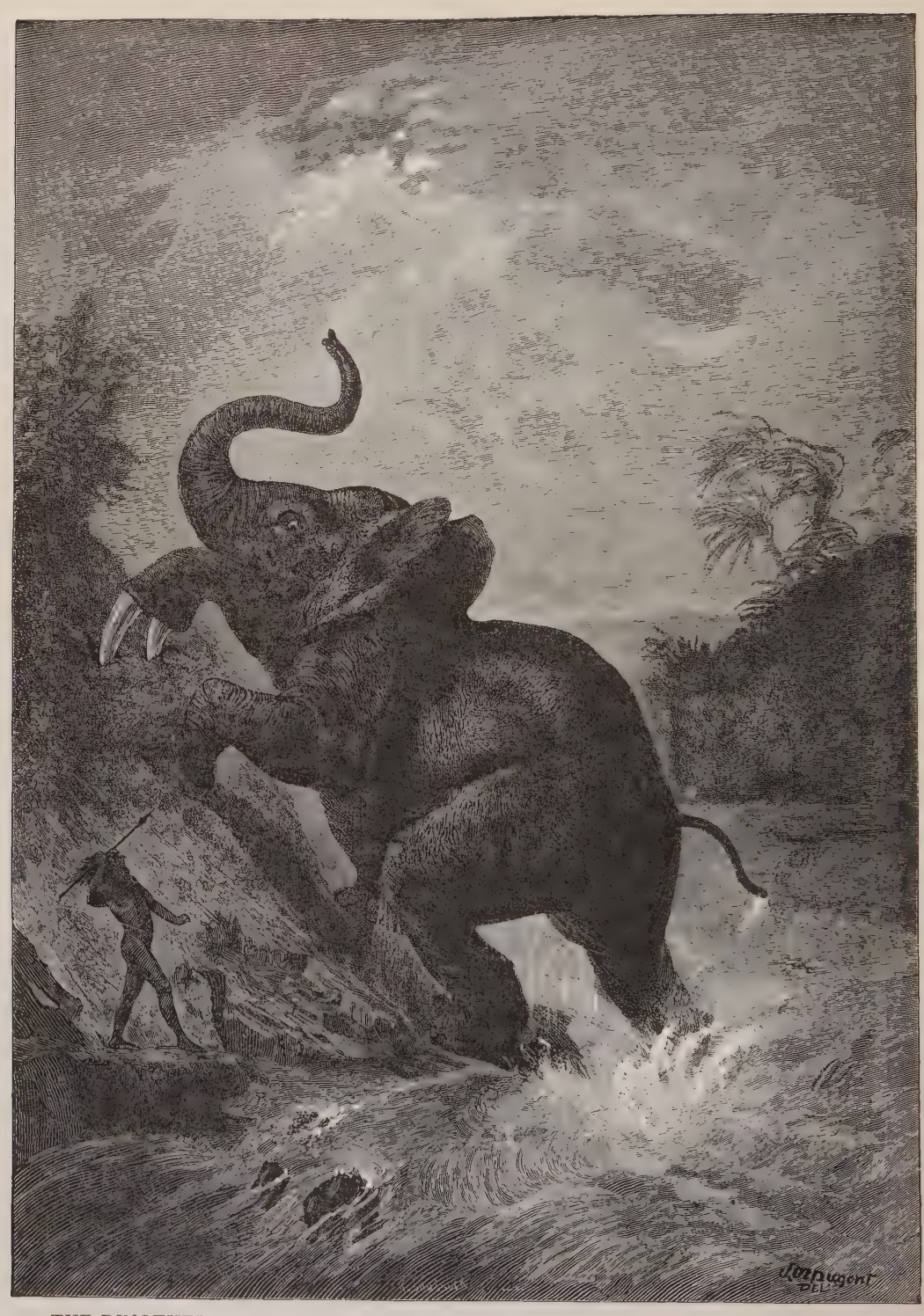
Though in modern days we look to Africa and Asia for the elephant, in those ancient times America had its droves that wandered over our present homes with other strange animals that have long since passed away. The great mastodon wandered over New York State in vast herds. Where Newburgh now stands, a fine specimen has been found, while similar remains have been unearthed at Mt. Holly, Vermont; and at New Britain and Cheshire, in Connecticut. Another and smaller species of mastodon, known as the American elephant, ranged over those sections of the continent now bounded by Georgia, Texas, and Missouri on the south, Canada on the north, and Oregon and California on the west, and was probably hunted by the cave-dwellers of old with weapons as rude as those now used by the native African hunters.

In the extreme north, especially in Alaska, bleak, cold, and unvisited for so many years, flourished the great hairy elephant, or mammoth. It will be seen, therefore, that at different periods America has been the home of three or perhaps more distinct species of elephants, that roamed about as did the buffaloes in the great West; and whereas there are now only two distinct kinds of elephants living in all the world, there were then at least fourteen.

The question will perhaps be asked, How do we know that these great creatures lived in America so many years ago? This can be very well answered by relating the adventures of some workmen at the Harmony Mills, Cohoes, N. Y. They were engaged in excavating a cellar, and after removing several thousand loads of soil, peat, trunks of trees, and other material, they came upon a great well in the rock, commonly called a pot-hole.

Continuing the excavation, they found trunks of trees that had been gnawed by beavers, though these animals are now never found in that locality; and finally, in the bottom of the great well, the astonished workmen discovered the jaw of an enormous animal, which Professor Hall pronounced to be that of a mastodon—an extinct American elephant. Digging still deeper, they found lying upon a bed of clay, broken slate, gravel, and water-worn pebbles, and covered with river ooze and vegetable matter, the principal parts of the mastodon's skeleton. According to Professor Hall, these prehistoric bones, dropped from the melting ice, had been deposited in the cavity by a glacier, ages ago, and so preserved as a page in the history of the time.

That other mastodons were carried to their graves on great glaciers, or were affected by them, is shown by a tooth of one in the Philadelphia Academy of Sciences, that is marked with the glacial scrapings; while still another,



THE DINOTHERIUM.—THE HUGE ELEPHANT WITH TUSKS CURVED DOWNWARD.

found in Kentucky, now in Rutgers College, shows, also, the glacial lines.

The Cohoes mastodon is now in the State Museum at Albany. Numerous similar remains in other museums of the country show that this giant beast ranged the United States in vast herds, finally being driven out or exterminated, possibly by the mighty glaciers that swept down over the face of the country in that distant age known as the glacial period.

A famous pasture for these giants seems to have been what is now known as the Big Bone Lick, a morass in Kentucky, about twenty-three miles from Cincinnati. Here, imbedded in the blue clay of the ancient creek, have been found the complete skeletons and bones of over one hundred mastodons and twenty mammoths, and the remains of several other gigantic monsters of former days.

One of the most remarkable of the American elephants, specimens of which have also been found in Europe, was the *Dinotherium,* a huge creature standing on legs ten feet in height, and attaining a length of nearly twenty feet. The tusks, instead of extending out of the upper jaw, were in the lower jaw and grew downward, giving the animal a very singular appearance. We know that the elephants of to-day use their tusks to lift and crush their enemies, but in the *Dinotherium,* the tusks actually point at the owner. What, then, was their use?

In answer to this, we find that the huge animal was a water-lover, and probably made its home on the banks of streams, living a life similar to that of the hippopotamus. With this knowledge, a use for these great recurving incisors is readily seen. They were used as pickaxes to tear away the earth and dig out the succulent vegetation that it fed upon; and at night, when partly floating, they might have been buried in the bank, forming veritable anchors for the living and bulky ships. When attacked by its—perhaps human—enemies, we can imagine the great creature struggling from the mire, lifting itself to dry land by striking its tusks into the ground and using them to hoist its ponderous body to the bank.

Remains of the *Dinotherium* are common in France and Germany, and a model of this great elephant has been purchased by the French government.

In India, there formerly lived six different kinds of elephants. One, called by the naturalists *Elephas Gangesa,* had a very small head, but its tusks were of so enormous a size, that forty or fifty boys and girls could have been lifted and carried with the greatest ease upon them and the head. The length of both head and tusks was over fourteen feet. The tusks were not bent like those of the mammoth, but curved gently upward, ending in extremely sharp points, showing them to have been very dangerous and terrible weapons.

In Malta, at about the same period of time, there lived a Lilliputian elephant, that when full-grown was barely three feet in height. Its babies would surely have been a curious sight. Imagine an elephant that could be carried about in your overcoat pocket, and you can then form an idea of this baby elephant of those far-off days.

HOW SOME ANIMALS BECOME EXTINCT

BY C. F. HOLDER

It is natural to suppose that young readers have often wondered why the myriad forms of animals that peopled the earth in the olden times have passed away, and how such changes have come about.

We know from the evidence of fossils that the kinds of animals that have become extinct, or ceased to exist, far exceed in number those now living. In some localities the rocks which form a part of the supporting ridges of the earth's crust are made up largely of extinct forms of shells, now turned to hard, solid stone.

What is their story? The rocks can not speak; yet, if we examine them carefully, they tell a wonderful history in a mute language of their own.

In the Catskill Creek, in the State of New York, it is evident that by a gradual uprising of the earth's crust all the forms of submarine life there have been lifted high and dry out of water; and so, deprived of their natural element, the entire population of this ancient body of water has perished. But there may have been another cause. In the Catskills and Helderbergs we find corals and sponges; and in the latter mountains we can trace a perfect coral reef upon the tops

of the peaks in one of the coldest parts of the State. Corals and sponges are animals that require warm waters for their birth and growth; and this fact and other indications go to show that at one time the climate of New York State and the surrounding country was much milder than at present, and that a gradual change to a colder temperature had perhaps destroyed these early forms of life before they were deprived of their natural element.

The change that resulted in the glacial time, when this section of country was covered with ice, undoubtedly caused the extermination of many forms of animal life. It may have been long ages in coming about, but the results are none the less certain, and to it is undoubtedly due to a great extent the destruction of the great mammoth and many other forms in the north.

When man appeared upon the scene, he at once began to destroy animals, and from that time to the present, various creatures have disappeared, and others are gradually passing away before our eyes—the direct result of man's attack upon them.

THE ARCTIC SEA-COW.

In the eighteenth century, voyagers to the arctic seas were familiar with a large and powerful animal resembling our manatee; in fact, it was a northern representative of this animal, called the rhytina—the arctic sea-cow.

In general appearance this animal was a stupendous creature, as it attained, when full-grown, a length of from twenty to twenty-eight feet, and

in some instances thirty-five feet, and a weight of several tons. The general color was dark brown; and the skin was thick and leathery and covered with a dense bristling hair that matted together, forming a protection from the ice and cold, and was comparable in appearance with the bark of a tree.

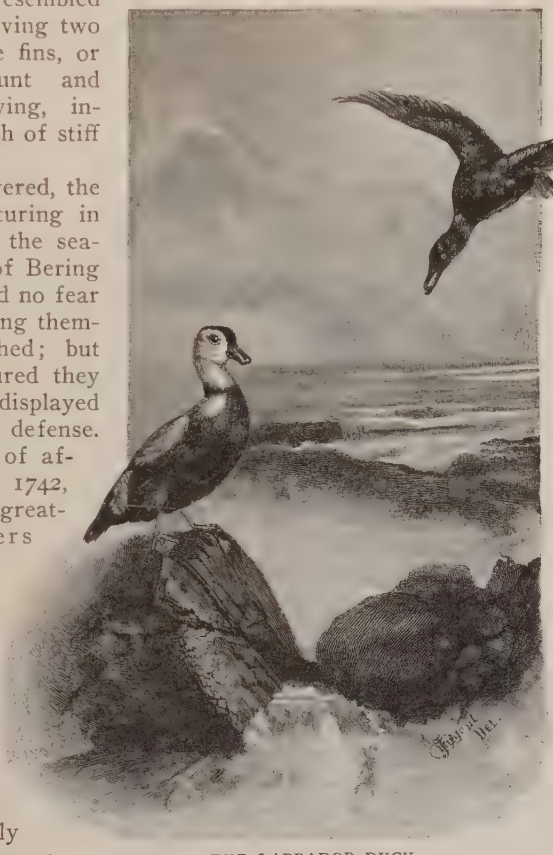
The head of the sea-cow was small in proportion to its size, and, instead of possessing teeth, was provided with two curious masticating plates. The tail somewhat resembled that of a whale, having two lobes; and the fore fins, or paddles, were blunt and without nails, having, instead, a thick growth of stiff rough hairs.

When first discovered, the sea-cows were pasturing in large herds among the seaweed of the shore of Bering Island. They showed no fear of man, even allowing themselves to be touched; but when one was injured they are said to have displayed much bravery in its defense. This was the state of affairs in the year 1742, when some of our great-great-grandfathers were alive. At that time a vessel was wrecked in the Arctic Ocean. The crew made their way to Bering Island, where for some time they subsisted upon fish and birds, until finally this game became scarce; and on the first of June, in the year mentioned, they commenced warfare against the sea-cow, which has since been named after Steller, one of the wrecked party. The sea-cows were killed with harpoons; and the animals were so large and powerful that forty men could scarcely drag a wounded one through the water.

The sailors were at last rescued from the island, and in 1754 a vessel commanded by a Russian, Ivan Krassil, visited the place and destroyed large numbers of the creatures.

In the succeeding year an explorer named Jakovler, seeing that the animals were about to become exterminated, laid a petition before the authorities at Kamchatka, asking that the animals might be protected by law. His plea was not heeded, however, and in 1757 another expedition landed at the island; others followed in 1758 and 1762, and in 1780, the last living sea-cow was seen by a native of Volhynia, none having been killed since 1762.

Thus in thirty-eight years from the time these creatures were discovered, they were totally exterminated; and to-day not a single skin and only a number of skeleton fragments are in the possession of naturalists to tell the strange story of the destruction of an entire race of great and powerful animals.



THE LABRADOR DUCK.

Much interesting information concerning the rhytina was obtained by the Swedish explorer Nordenskjöld, who found numbers of deposits of their bones which were utilized by the natives for various purposes; the ribs, for example, being used for shoeing the runners of sledges. When the animal was alive, the fur, or hide, was made into boats called *baydars*.

It is supposed by some writers that the extinction of the great mammoth was hastened by early tribes of men, who were of necessity hunters. That the great elephant existed at the same time with our ancestors is shown by the fact that in France and elsewhere their bones have been found together with those of man and many animals now extinct.

As late as 1834, Nuttall, the famous authority on birds, wrote concerning the great auk: "As a diver he is unrivaled, having almost the velocity of birds in the air. They breed in the Faroe Islands, Greenland, and Newfoundland, nesting among the cliffs, and laying but one egg each. They are so unprolific that if this egg be destroyed, no other is laid during that season. The auk is known sometimes to breed in the isle of St. Kilda, and in Papa-Westra; but, according to Bullock, no more than a single pair had made their appearance for several years past."

To-day not a single individual of this species

of auk is alive; and the skin in the Museum of Natural History, Central Park, which is valued at over one thousand dollars, one at Vassar College, and a few others, are the only specimens known in the world.

Early in the last century the birds were very common along the northern Atlantic coast, coming as far south as Nahant. But warfare was commenced upon them, and, though it hardly seems possible, their extermination is doubtless complete; the last living bird having been killed in 1844, on a group of islands called Funglasker, off the southwest coast of Iceland.

In the eighteenth century, these birds, which were large, handsome, and striking in appearance, were common at the Faroe Islands; and as they were found to be good eating, they were slaughtered by the boatload, not only for immediate use, but to be dried and preserved. They were finally driven to a desolate rock that was considered inaccessible; but one calm day a Faroese vessel succeeded in making a landing, and the crew destroyed nearly the entire rookery. A few birds escaped to sea and returned after the departure of the men, and for a time were safe. Then as if Nature herself were in league against them, the rock, a few years later, was engulfed by a submarine eruption.

The few remaining great auks now assembled and formed a rookery on a rock called Eldey, where, for fourteen years, they lived a precarious existence. During that time sixty of their number were taken, and finally the last pair was destroyed. Their history in other localities is very similar to this.

That the birds were once common on the Maine coast is shown by the fact that their bones are found in the oyster-shell heaps at various parts of the shore.

At the same time and in the same locality with the great auk, lived the Labrador duck, a fine bird, quite rare even in collections, and now totally extinct. The last known living specimen was killed by Colonel Wedderburn, of Halifax, in 1852.

In a similar way the curious dodo, which was a giant pigeon, was exterminated. The sailors who visited the island of Mauritius used to kill them in mere wanton sport.

The notornis, a beautiful rail of New Zealand, has become extinct probably within the memory of some of our readers, its extermination also being due to man.

In very recent time we have seen the buffalo crowded farther and farther into the mountains, and exterminated from our Western plains. And as civilization also advances from the Pacific, the buffalo, mountain-sheep, pronghorn, and all the noble game animals of the great West, in a few years will be represented only by their stuffed skins and dried bones in our museums. Let us try to preserve some of the interesting species that yet remain.

The PEACEMAKER.

-By-

FRANK·LILLIE·POLLOCK·

V

SCOTT CALDWELL was a forest-ranger of the Algonquin National Park, which lies between the Ottawa River and Lake Huron, and his duties were to look out for fires, kill wolves whenever he got a chance, keep the canoe-ways open, and warn off unlawful hunters; for no shooting is permitted in that immense game-preserve.

It was the end of September, and the mosquitos and sand-flies had ceased to make the woods unendurable. Scott had been following a chain of small lakes in his canoe, and at night he camped at the same spot where he had camped on his round of a month before.

Before he turned into his blankets, he heard the bellow of a bull moose somewhere, far away across the forest—a vast grumbling thunder, more charged with primeval savagery than any other sound of the wilderness. He had heard that sound almost every night for two weeks. The park was full of moose, that had grown very bold under a couple of generations' safety from rifles. It was their mating season, and the bulls were challenging each other, and fighting savagely.

He went to sleep, but was awakened before dawn by a tremendous uproar. He jumped out of his blankets and put his head out of the tent. It was a brilliant, windless night, with moonlight almost as bright as day, and away across the yellow autumn ridges there was a noise of furious smashing and tearing among the brush, mingled with savage gruntings and roars, and sharp, recurrent clash and rattle. It was somewhere down the lake; it did not sound more than a quarter of a mile away.

As soon as he got the sleep out of his eyes, Scott realized what it was. A couple of bull moose must have been fighting it out. Few men have ever witnessed such a duel, and Scott was keenly anxious to see it. He looked at his watch; it was after three in the morning, and after listening a little longer to the thrilling sounds, he

took his rifle, launched his canoe, and paddled down along the shore.

He thought that he might be able to see the fight from the water, but when he drew opposite the noises it was apparent that they were a hundred yards or so inland. He got to shore, therefore, and stole in through the cedar thickets, holding his rifle ready for self-defense in case one of the maddened animals should charge him.

Suddenly the sounds of battle ceased. Scott halted, listened, and waited. He thought he heard an occasional stamping, but the fight seemed over. He advanced a few rods further, cautiously, and then stopped with a paralyzing shock of fright.

Not twenty feet from him were two moose, looming black and gigantic over the scrubby thickets, and they were standing motionless, with lowered heads close together, face to face.

For a moment Scott was afraid even to breathe. The moose did not move, and he ventured to take a step backward. A stick crashed under his boot-heel, and at the sound both moose plunged and leaped from side to side, but without separating their heads. The broad prongs of horn creaked and rattled together.

Scott stood still, astonished at their queer behavior, but presently he perceived the reason of it. The prongs of the bulls had become interlocked, so that the fighters were unable to disengage themselves.

It is a mishap that occurs not infrequently to the fighting moose and deer. The timber-wolves usually finish such helpless victims very quickly, and woodsmen now and again pick up a pair of great skulls with the antlers still fast locked together.

With more assurance Scott examined the trapped warriors at closer range. One was an old bull, standing full seven feet to the top of his humped shoulders, with a superb spread of polished ebony-dark horn. The other, a smaller and probably younger animal, had a great jagged gash across his flank that still dripped dark blotches on the pine-needles.

They both wrestled and roared as the ranger approached, wrenching their antlers desperately, but they could not break loose. Scott was struck with pity. He could not leave the splendid animals to the first wolf-pack that passed. It was part of his duty to protect the game, and he decided to wait till morning, and see if he could not find some means of disentangling them.

So he sat down at the foot of a tree and waited for daylight. The moose moved restlessly about, butting and tugging alternately and striking at each other with their fore-hoofs. Probably each accused the other of holding him. Presently the larger bull stumbled and fell, dragging his antagonist with him, and they kicked vainly in the endeavor to get up again, till at last they lay quiet on their sides, apparently tired out.

With the earliest light Scott examined them. The prongs of the smaller bull had been forced between those of his antagonist by a tremendous effort, and the broad antlers were so entangled that nothing short of a saw or a lever could get them free.

Scott had no saw, and would have hesitated to go so near the animals if he had, but with a long lever he thought that he could do the work. The moose could not get up nor move much, and so long as he kept out of reach of the sharp fore-hoofs he would be in no danger.

He paddled hurriedly back to camp and got his ax. When he returned the moose lay as he had left them, and he cut a sapling about ten feet long and as thick as his arm, and trimmed it, sharpening one end. With this formidable lever he approached the panting bulls and rather nervously tried to insert the point between the locked prongs.

But at the first touch of the pole the animals fell into such a wild and sudden panic that he retreated hastily. They roared, kicked, and squirmed, and writhed about the ground with the pine-needles flying in clouds. It was too violent a convulsion to last long, and in a minute or two they lay quiet again, heaving, exhausted, and quelled for the moment, Scott thought.

He came up again, on the side opposite the dangerous hoofs, and once more tried to force the sharpened pole between the tangled antlers. Again and again he failed as the moose jerked their heads aside, but finally, with a quick thrust he managed to insert the lever in the right place, and he threw his weight on the other end.

The tough horn creaked and bent; so did the lever. The larger moose jerked his head violently—there was a snap, and his head was free. Almost before Scott could realize that he had succeeded, the smaller bull had sprung up and vanished into the woods like a brown flash, with a scattering of dead leaves.

Then the big bull went up as if he had been raised by a spring, and before Scott could leap aside he was knocked headlong into a clump of hemlock ten feet away by a single sweep of the broad antlers.

Luckily it was only a glancing blow, or it would have crushed in his ribs. Scott scarcely understood what had happened before the bull crashed into the hemlock like a locomotive, with a bellow that fairly chilled Scott's backbone.

"ONCE MORE HE TRIED TO FORCE THE SHARPENED POLE BETWEEN THE TANGLED ANTLERS."

The moose was stopped by the elastic resistance of the shrubs, and Scott, who had been pitched into the middle of three or four small trees, scuttled into the densest corner like a scared rabbit.

The bull roared savagely, with outstretched neck. Scott was far from expecting any such ingratitude for all his pains, and when he realized the situation he was very angry. If he had had his rifle he would have shot the beast at once, but he had laid the weapon down somewhere out of sight.

The moose sniffed noisily into the thicket, and tried to strike the ranger with its fore-hoofs. The blows came crashing through the branches, but Scott was able to dodge them by wriggling to the other side of the clump. This game could not last long, however, and while he watched his enemy he cast rapid glances about for some safer refuge.

Twenty yards away a great cedar had fallen, lodging its top among the branches of a beech. Its trunk sloped from the ground to a height of twenty or thirty feet, and Scott perceived that if he could reach the butt he could run up the sloping trunk and be out of danger in a moment.

The difficulty was to reach it. But a swift thrust of the hoof that missed his shoulder by an inch warned him that he would have to attempt it. He crawled nearer the edge of his covert, on the side farthest from the moose, gathered his legs tensely under him, and at a favorable moment he sprang out and ran.

A crash told him that the bull was at his heels. He dodged round one side of a large pine as the moose plowed past on the other. As the animal charged blindly back again Scott again slipped aside and made another bolt for his tree.

He reached it this time, by the margin of a second, for the bull's antlers clattered against the trunk and almost knocked him off as he ran up its slope. After the first couple of yards the cedar was closely set with rusty branches, and they tore his clothes as he forced his way up the swaying trunk.

For the trunk swayed and gave as he climbed it. The bull, following him underneath, butted it hard and shook it from end to end. Evidently its top was very slightly caught in the beech that supported it.

Scott had not climbed half-way to the top of the tangled trunk, when he felt a dangerous yielding under his feet. There was a great, sustained, increasing crackle and crash from the top, and it sank under him.

Scott gave one terrified glance down at the bull waiting almost below. He made a spasmodic effort to jump aside, but the branches held him, and the cedar went sailing down and completed its long-interrupted descent in a tremendous shock and smashing against the earth.

The shock drove him deep among the branches, tearing his face and hands, and he tried to wriggle deeper yet. He expected the bull to plunge upon him the next instant. Blinded among the twigs he could see nothing, but he was aware in a few seconds of a great smashing and struggling that was shaking the whole mass of the fallen tree.

He disengaged himself from the branches. The moose was not visible, but down in the heavy cedar-top Scott saw a furiously struggling mass of dark hair and the black tip of a shovel-shaped horn.

The bull had been caught by the falling tree and buried among the branches. When he peered into the tangle Scott thought that the animal was pinned down by the trunk, but had been saved from crushing by the mass of limbs. The bull was safe enough now, however, and perfectly incapable of getting out.

Scott felt no great pity for it, and went back to camp with his rifle and ropes. Next day, however, he returned to the place with an ax, intending to chop the animal free.

He found four timber-wolves sitting on their haunches round the tree, waiting patiently till the bull should cease to struggle, or till they overcame their dread of a trap. They bolted at Scott's appearance, too quickly for him to get a shot, and he chopped the moose out of the branches.

The animal was quelled at last. When it was free it struggled painfully to its legs, gazed anxiously at Scott, and made its way limpingly down to a little stream and drank for a long time. Then, while Scott watched it, it seemed to melt into the woods with the speed and silence of a shadow.

HOW ELK SHED AND RENEW THEIR ANTLERS

AMERICAN ELK, OR WAPITI, ONE WEEK AFTER ANTLERS WERE DROPPED.
(Copyright, 1904, by the New York Zoölogical Society.)

AMERICAN ELK, OR WAPITI, ONE MONTH AFTER ANTLERS WERE DROPPED.
(Copyright, 1904, by W. T. Hornaday.)

How many persons, among the many thousands that annually visit our zoölogical parks, realize, as they pause to admire the noble bucks of the deer family—particularly the wapiti, or American elk—that their branching antlers are cast off annually and renewed and well hardened within the short period of seven months?

Before describing the manner in which elk shed their antlers, I should like to explain the difference between "antlers" and "horns." All the members of the deer family—the moose, caribou, elk (in Europe the animal which we call moose is known as elk), and smaller deer—possess antlers, while the appendages on the heads of goats, sheep, cattle, and the like are known as horns, and, with one exception—the American antelope or pronghorn—are retained by their owners throughout life.

AMERICAN ELK, OR WAPITI, ANTLERS FULL-GROWN.
(Copyright, 1900, by the New York Zoölogical Society.)

Elk shed their antlers about the first of February, though much depends upon the locality and upon the age and health of the animal. It often happens that one antler is carried several days after the other has been dropped. The new antlers push off the old ones, and when they appear they resemble scars on the animal's forehead, but soon take the form of two black-velvet buttons about the size of silver dollars. As they continue to grow they gain in length only, and by the first of July they have attained their full size. If you could examine them now you would find them soft, rather flexible, nourished by blood, and incased in a thick, tough skin covered with velvety fur. The antlers are now "in the velvet,"

as the hunters term it, a most critical period for the owner, who seems to realize it, for he is careful to avoid contact with anything liable to injure them. Should an accident happen and the skin get broken or the antler disfigured, it might result in the elk's bleeding to death, or in his carrying a deformed antler until the following February. Through a process of nature the blood-vessels that have fed the antlers are shut off about the middle of July, and then they begin to harden. A few weeks later the elk may be seen rubbing them against trees or thrashing them about in the brush while endeavoring to rid them of the velvet, and in a few days it hangs in shreds and soon disappears entirely. The elk is now lord of the forest, and is ready to combat with his rivals or enemies.

Professor W. T. Hornaday, director of the New York Zoölogical Park, has kindly given permission for the use of the copyrighted photographs in this article. His "American Natural History" has a calendar of the elk's antler-shedding.

PORCUPINES AND SALT

Some men who were camping in the Adirondacks several years ago, on breaking camp in the autumn, left an old tub which was saturated with salt brine. On returning to the same camp the next year, they found that the tub had been gnawed until little of it was left. They were not long in finding out what animal had done the work, for the camp was overrun with Canadian porcupines. At night they became such a nuisance that the campers were obliged to kill them to protect their property. The handle of a paddle was gnawed half through.

The explanation of their presence in such numbers during that year, when they had not been noticeably abundant in the previous year, is that they had made a rendezvous of the camp, being attracted by the old brine-tub. On this they had feasted all

PORCUPINES EATING THE OLD BRINE-TUB.

winter, and for that reason were greatly pleased with the locality.

An interesting query is this: Is the liking for salt an acquired or a natural taste? Were they ever able to gratify that taste to any extent before man gave them a chance to do so?

A WHITE SQUIRREL

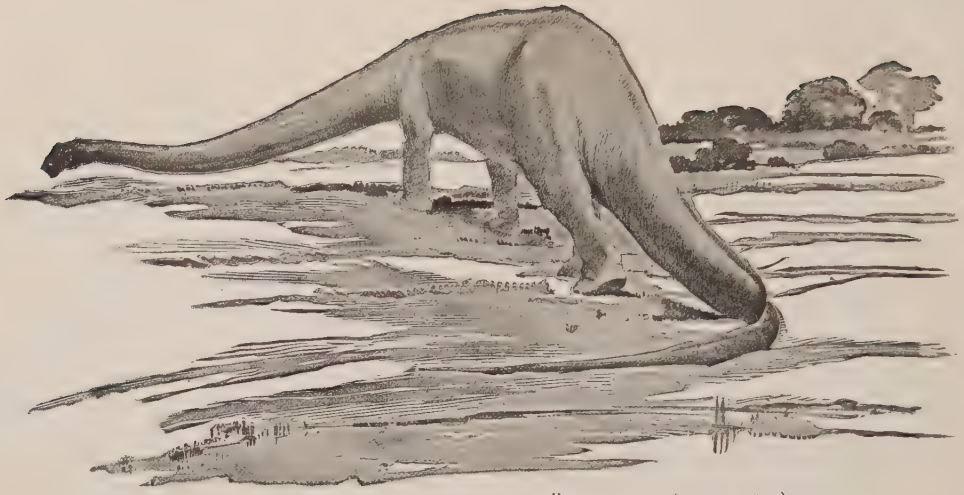
BY W. C. KNOWLES

A FEW years ago a snow-white squirrel appeared near the writer's home among the Berkshires, and it was her good fortune to have this white-furred, pink-eyed little beauty for a pet. This albino was not captured until autumn, when it was full-grown. It was not quite as large or as strong as its companions, and so was more easily tamed.

Few of the young people who keep tame squirrels realize that a cage with plenty of nuts and water is as hard for their pet as prison bars with bread and water for a boy. We found "Frolic," the white squirrel, eager for all kinds of fruit except grapes. In June he stained his paws with strawberries; in August he feasted on mushrooms; and during winter birch buds fresh from the snowy woods were always a great treat. Whenever the cage door was opened, this fairy-like pet would climb into the window-garden and eagerly nibble the shining Christmas ferns.

The young folks who have seen wild squirrels at their games of tag in the June woods know how much those in captivity need to play. A large pan of snow on a bare floor makes an ideal romp for such a lively pet. Frolic would turn somersaults, and frisk and play by the half-hour in his delight over snow, which he had never seen until it was shown him in the house. Instinct seemed to tell him, as it does the boys and girls, that snow is just the thing to play in. He often tried to coax the kitten to romp with him, plainly showing that a caged pet longs for companionship. Sometimes tame squirrels, when frequently fed, will live for months in a dooryard, and are far happier, healthier pets when allowed their freedom. I know of one case where a wild gray was coaxed to live in a country dooryard. Once she disappeared and was given up as lost; but what was our surprise, one sunny spring morning, to see her returning along the rail fence with a baby squirrel in her mouth, exactly like an old cat with a kitten! The wise little mother made trip after trip, until she had her entire family of four safely housed in her old home in the spruce-tree, where she knew perfectly well that she would find protection and plenty of food. With mother-like instinct, she undoubtedly brought the weakest first, for the last squirrel kitten was too heavy for the panting little mother, and she coaxed it along behind her over the perilous rail fence.

A WHITE SQUIRREL.



A RESTORATION OF THE "LONG-LIMBED" DINOSAUR (*DIPLODOCUS*).

AN ANIMAL GIANT OF LONG AGO

BY WALTER L. BEASLEY

When Professor Henry F. Osborn, of the American Museum of Natural History, New York, planned and directed the mounting of the gigantic skeleton of the Dinosaur-Brontosaurus, placed on public exhibition there, he made one of the most noteworthy contributions to science of recent times. For the first time the world had a realistic glimpse of the actual size and appearance of the mighty beast which roamed the primeval marshes of western America and other parts of the globe, during the Age of Reptiles, estimated to have been from three to twelve million years ago. It was one of the largest animals that ever lived to walk on four legs, being nearly sixty-seven feet long and fifteen and a half high. The tail measured thirty feet in length and the neck eighteen; the body weighed about ninety tons. As a fossil "find" this surpasses all others in existence. As an object-lesson of the story of the rocks of the past ages, it is far more impressive to the young than volumes of text-book reading. To the children especially it proved a wonder of wonders. Groups and school-classes flocked to the New Dinosaur Hall, viewing with astonishment the huge monster, whose skeleton form towered above their heads. The word "dinosaur" means, literally, "mighty lizard"; and "brontosaur" "thunder-lizard."

The fortunate explorer, whose keen eye made this, the most remarkable fossil discovery of the age, was Mr. Walter Granger. In September, 1898, Mr. Granger started on a reconnoitering trip to a point four miles distant from Bone Cabin Quarry, the camp of the field expedition in South Central Wyoming, to renew his search of a locality where he had picked up on the surface the previous season a few stray pieces of fossil bone. Mr. Granger had not excavated more than a few feet down before other bones were met with which corresponded to those found the preceding season. Going deeper, the cut gradually revealed a large section of the great backbone of the dinosaur, with ponderous ribs still attached. They proved to be the greatest fossil prize ever unearthed. In almost a compact plot nearly two thirds of the skeleton was found, save the head and a few minor parts.

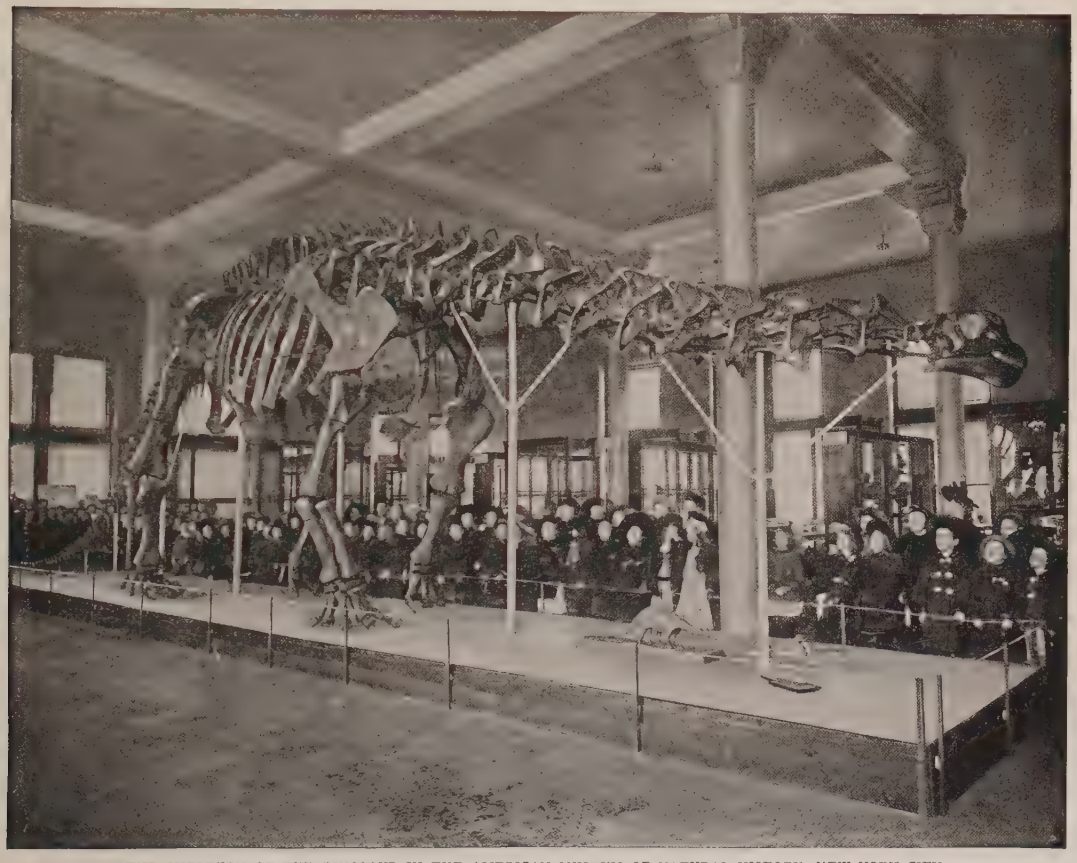
This whole region, together with other Rocky Mountain States, was, during the Age of Reptiles, covered by a vast inland sea and shallow

lagoon. The climate was tropical. In these and around the banks great herds of the giant brontosaurs roamed and were the undisputed monarchs of their day. Owing to the uplift of mountain ranges or some other geological catastrophe, these clumsy and weighty beasts sank helplessly into primeval quagmires, and were gradually smothered and covered up. The hard parts of their remains, such as bones, spines, vertebræ, etc., were slowly turned into brittle, stony substances called fossils, which retained both the outward form as well as the peculiar structure of the animal in life.

beneath the surface on or near such a spot usually results in finding the various parts of some animal's body. Wyoming and other particular sections of the West, known as "Bad Lands," is now a vast prehistoric cemetery, wherein are entombed the fossilized remains of the mighty dinosaurs.

Professor Osborn has taken the lead in the number of important fossil discoveries made, and his halls in the American Museum now contain the finest collection of extinct creatures to be seen anywhere in the world.

Throughout the whole summer of 1898, Mr.



THE SKELETON OF THE DINOSAUR IN THE AMERICAN MUSEUM OF NATURAL HISTORY, NEW YORK CITY.

The fossil-hunter, like the gold-prospector, has to rely on sheer luck to a great degree in searching for specimens. A sure clue is usually given by a fragment lying on the surface or some exposed bone protruding from a slope or incline, which has been uncovered by the action of the wind and waters. Digging

Granger and his fossil-party were busy in getting out the skeleton from the rock and preparing it for transportation, the various parts being covered with layers of plaster and burlap wrappings, and thereafter bound tightly with rawhide strips. This method held the brittle and fragmentary bones in position

during transit. Extracting the lengthy creature's form from the clay and sandstone formation, patching up and restoring frail and missing parts in the laboratory, constructing and putting together the massive bones of the body in their final state, occupied the attention of Professor Osborn and his entire staff for several years. Two years were spent in mounting the great skeleton.

In form and appearance the brontosaurs were quite unlike any living animals, and are remotely related to the lizard family. They had a long, thick tail like the lizards and crocodiles; a long, flexible neck like the ostrich; a thick, short, slab-sided body; straight, massive, post-like limbs, suggesting the elephant, and a remarkably small head for the size of the beast. The ribs and limb- and tail-bones are exceptionally solid and heavy, while the vertebræ of the back, neck, and tail, on the contrary, are lightly constructed. The ribs are half a foot wide, a number of them weighing more than one hundred pounds each. A single footprint of the creature must have nearly covered a square yard upon the ground.

The long neck aided the animal to forage for food, which consisted chiefly of soft, succulent plants growing on the bottom of streams or lagoons. The row of short, spoon-shaped, stubby teeth were used to bite and pull the tender leaves and water-plants, which it evidently swallowed without chewing, as the creature had no grinders or molar teeth, and so could not masticate its food.

A model in clay, executed by Mr. Charles R. Knight, is considered a perfect representation of the ancient monster. This is seen under the neck of the mounted skeleton. It shows, in little, the original whose remains tower high above it.

"GOING BAD"

The picture accompanying this piece illustrates a time of danger that is well described, as follows, by Mr. Frank C. Bostock in his book: "The Training of Wild Animals":

"What those who have charge of wild animals in captivity, and especially trainers, dread most among the lions and tigers, is that unexplainable change of temper called 'going bad.' Lions are likely to 'go bad' about the tenth year of life; tigers two or three years earlier. The male tiger is the dread of the profession when he reaches this condition, because he is more likely to go into a frenzy without warning, and once gone bad, nothing will satisfy him but murder. He will leap for any man within reach, and when once his teeth are on the bone, nothing but fire will make him let go—and not always that.

"This going bad may come in the nature of a sudden attack, or it may come on slowly and be headed off if taken in time. An old trainer can usually detect the symptoms of this curious ailment. It seems to be in the nature of a disease, and other animals recognize it and shun the affected one. When one is warned of its approach the danger is not great; all that is required then is a level head, and the good sense not to interfere with the animal.

"A good trainer never dreams of interfering with an animal in this condition. If attacked, his one aim is to defend himself, until he has a chance to escape from the cage, and to separate the animal from his fellows as soon as possible. Sometimes this bad temper will continue but a short time, and again it will become a lasting mood. In that case, the lion or tiger is sent to the lonely cage to spend the rest of his life there."

"GOING BAD."
Drawn by Paul Bransom.

CURIOSITIES OF PLANT LIFE

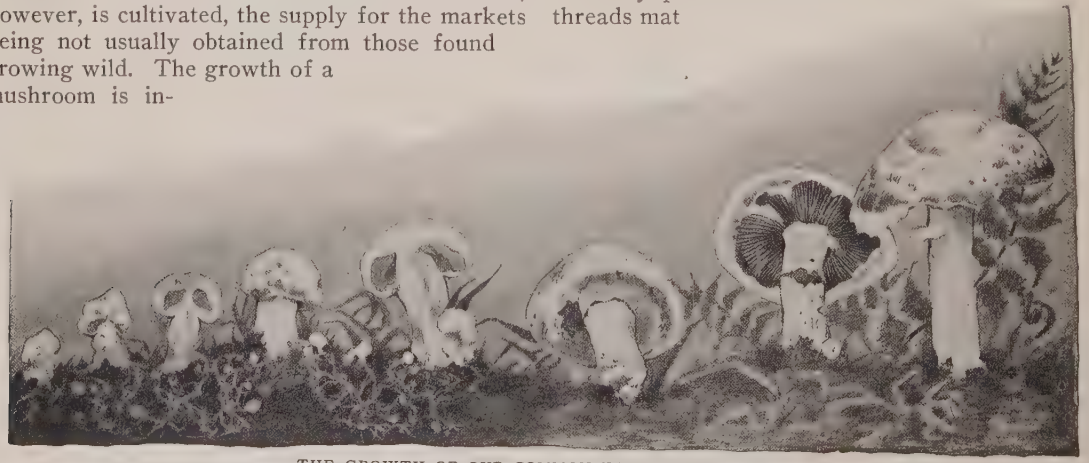
PART II

THE FUNNY FUNGUS FAMILY

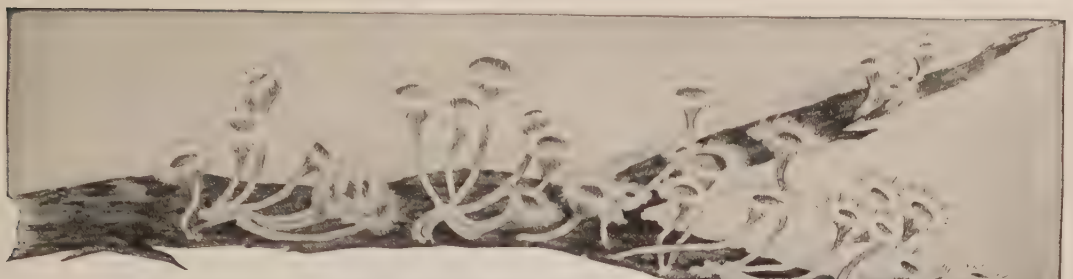
Going through the woods in summer, we often find beautiful bits of a low form of plant growth called fungi, branching like brackets from the trees, covering old stumps, or poking their dainty heads through the dead leaves at our feet. Many more may be found, by careful searching, hiding themselves behind the grasses and leaves. We exclaim with delight at their exquisite forms and colors. We can admire—but beware! Don't eat. There, perhaps right in your path, is that innocent-looking death's-cup, the deadly *Amanita,* most poisonous of all the mushrooms. So easily are the poisonous ones mistaken for harmless kinds, it is a safe rule for young folks never to eat of specimens, but just study them and admire their beautiful colors and forms. A swelling of the stem at the base, hidden partly or often wholly underground, is always a dangerous sign.

"WE CAN ADMIRE—BUT BEWARE! DON'T EAT." (*Amanita phalloides.*)

Strange to say, the death's-cup closely resembles the one most eaten of all the meadow mushrooms—our common table mushrooms—which, however, is cultivated, the supply for the markets being not usually obtained from those found growing wild. The growth of a mushroom is interesting. A good one to study is the common table mushroom, as it has characteristics common to all the fungus family. The first we see is the tiny button-like form pushing its head above ground. This, as it grows taller, swells and expands at the top into a bulb-shaped body; and soon, on the under side, we see a break in the skin or veil. The top keeps swelling and the skin splitting till we have the gills in sight, stretching from outer edge of cap to top of stem. Their entire surfaces are covered with minute club-like protuberances which hold and scatter the tiny dust-like particles or spores, just as flowering plants do their seeds. This is the mission of our mushrooms, for what we see above ground is only the fruiting body—the real body of the plant lies underground. Let us follow one of those minute spores down in the rich, moist earth. It swells, absorbs food through its walls, and divides into two cells. These again swell and divide until we have a tangle of white thread-like substances called the mycelium—the real body of the plant. At many points the threads mat



THE GROWTH OF OUR COMMON TABLE MUSHROOM. (*Agaricus campestris.*)

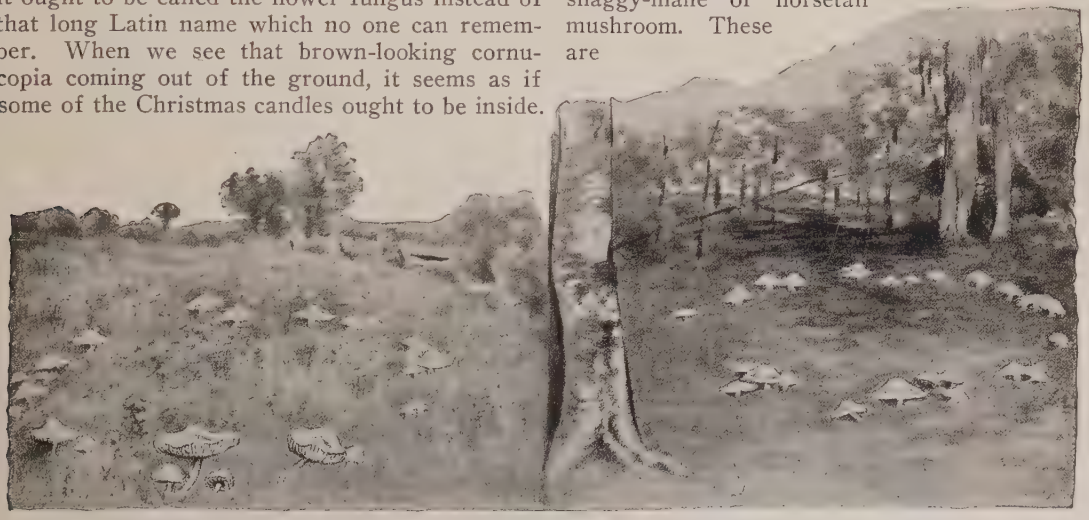


"WE PICKED UP, ONE DAY, A BRANCHED STICK COVERED WITH DAINTY CUPS."
(*Sarcoscypha flocossa.*)

together, forming tiny knobs which increase in size and push upward until they break the soil and look out upon our world, where they soon become the familiar parasol-shaped mushroom. How strikingly different are fungi from other plants! They have no green leaf, and none of that wonderful green coloring-matter, chlorophyl, which takes carbon from the air and hydrogen gas and oxygen gas from water and forms them into food for the plant, so making it an independent being. As the fungi lack this, they must get the food already made by some other plant or animal. That is the reason we find them attached to trees, logs, anything that will furnish them with the desired food. Many forms look like flowers and are just as beautiful. We picked up, one day, a branched stick covered with dainty cups, bright red inside, on their tall, curving stems; and I certainly think it ought to be called the flower fungus instead of that long Latin name which no one can remember. When we see that brown-looking cornucopia coming out of the ground, it seems as if some of the Christmas candles ought to be inside.

"THAT BROWN-LOOKING CORNUCOPIA."
(*Craterelles cornucopioides.*)

Probably we have all seen, in the fields or on the edge of the woods, that circle called the fairy ring. Before fairy folk came to be doubted, it was firmly believed these rings were the dancing-ground of the fairies. In the moonlight the sprites danced, wearing down the grass under their feet—at least so our grandfathers said, but we must take science's simple explanation of it. A fungus plant will soon exhaust all the fungus food from the soil beneath it, so that only the spores which fall outside this barren spot will take root and flourish. So the ring is always widening outward, forming a perfect circle unless something interferes with it. The rings are abundant in wet weather, of a buff color or reddish. In the vast family of fungi, about thirty-eight thousand kinds of which are known to botanists, there are many queer varieties, as the shaggy-mane or horsetail mushroom. These are



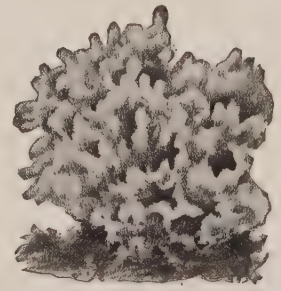
"IN THE FIELDS OR ON THE EDGE OF THE WOODS, THAT CIRCLE CALLED THE FAIRY RING."
(*Marasmius oreades.*)

such rapid growers you can hardly believe your eyes in the morning to see a whole patch of them where there were none the night before. Their coloring is gorgeous, the gills being a deep salmon-pink and the spores black; the latter, when mature, dissolve into a black fluid which drips from the cap. This fluid was used for writing-ink when people made their own. Another peculiar fungus is the delicious morel; and you will have no trouble in knowing it, so different is it from any other, with its dark-brown pits covering the entire outer surface.

SHAGGY-MANE.
(*Coprinus comatus.*)

A beautiful white form is the trembling fungus, which, if you touch it, will shake like a bowlful of jelly. It is very soft and grows close to the ground. Perhaps the handsomest of all is the coral fungus. Its name describes it well in color, shape, and growth. Found all over the world is the earth-star, beautiful in its oddity. You can tell what the weather will be by it, for it is nature's barometer. When you see it spread its star-like covering on the earth, then prepare for rain and cloudy weather; but when it closes its petals up around its puffy body, fair, dry weather is at hand. Then it delights in being rolled about by the wind in all directions, scattering its spores as it goes, but always resting at night or in damp weather. A fair-weather traveler indeed! We often come across that cunning little one, the bird's-nest fungus, each nest containing four or five eggs that lack only a fungus bird to sit on them. All have heard the saying, "A mushroom growth"; and, indeed, many of these plants have lives of but a day or so. Others there are which add, year by year, a rim to their cup or bracket; and some have been known to reach the age of eighty years. Our admiration and interest grow with the study of these little plants. All of us like to know the principal birds, trees, etc., we see on our walks, and why not learn to know the fungi? In winter as well as summer they await us in woods and fields. We certainly should feel grateful to them when we think how they absorb and purify so much of the poisonous matter in the earth and air, making our world a much healthier place for us to live in; hiding often in the darkest of corners, which they brighten and beautify with their lovely colors. They never cease their good work.

"THE DELICIOUS MOREL."
(*Morchella crassipes.*)



"IF YOU TOUCH IT, WILL SHAKE LIKE A BOWLFUL OF JELLY."
(*Tremella fuciformis.*)

JEAN FERGUSON.

A PLANT THAT AIMS ITS WEAPONS

DR. K. G. LEAVITT has been studying the thorns of the common red-berried thorn-tree, known to scientists as *Cratægus crus-galli*. He counted all the thorns on many branches and found that there were many more pointing downward than upward. On some branches

THE CORAL FUNGUS.
(*Clavaria formosa.*)

A FAIR-WEATHER TRAVELER.
(*Geaster hygrometricus.*)

BIRD'S-NEST FUNGUS.
(*Cyanthes vermicosus.*)

nearly all were pointed downward. He found that the thorns started out about equally in num-

TWIG OF THORN-TREE.
Shows most thorns pointing downward.

ber on the upper and lower sides (as do buds), but nearly all the thorns on the upper side curved downward more and more as they grew in length. This he regards as a noteworthy fact. In an extended article in "The Plant World" he says:

"Very few shoots, in normal plants, turn their points downward. None of the shoots of *Cratægus* do so except the thorns; and it is very singular and interesting to find that these branches, so highly modified in form, . . . differ from all the other branches of the tree in their physiology.

"What, then, is the usefulness to the tree of the strong downward trend of these spurs? The answer is doubtless to be found in the browsing habits of certain foes of *Cratægus*. The thorns are evident defenses against those animals which in a wild state feed, or formerly fed, upon the leaves—pricking their noses, lips, and tongues. But why should *down-pointing* thorns be better than others? The Herbivoræ whose depredations were of old the 'reason' for the existence of the thorns in *Cratægus* and allied plants were members of the Bovidæ and Cervidæ—the ox and the deer tribes. We may, therefore, perhaps get the information we want from the domestic cow. If we catch her as she feeds, we at once see how important a part the tongue plays in securing food. While the horse seizes his food with his lips, the cow, on the other hand, constantly makes use of the tongue in grazing. It shoots out from right to left and with a quick, sweeping, circular motion draws the grass in. If a handful of clover is held toward a hungry cow, she will reach for it with extended tongue which, if necessary, may be protruded several inches beyond the muzzle.

THE COW ATTACKS THE TWIG FROM UNDER SIDE.
(Thus the twig is best protected.)
Both cuts on this page are from "The Plant World."

The tip curves around the desired food and the rough surface helps to hold it. From constant use the tongue becomes a strong and adept organ of prehension. Now note that in browsing, when such an object as the depending branch of a tree is sought, the protruded tongue curves upward, and the branch is seized from beneath, as shown in the illustration above. This is the habit of the deer, as well as of the ox, kind; and this observation makes it plain that the tendency of the spurs is a nice adaptation to their protective function with a view to the foes to be feared and the quarter from which attack is to be expected.

"It is not unreasonable to surmise that had the browsing animals of northern temperate regions —the home of *Cratægus*—been of the horse kind, then the spurs of our plant would have pointed at all angles indifferently."

A GIGANTIC JACK-IN-THE-PULPIT

HEREWITH is an illustration of the largest aroid, both in leaf and flower, of which we have any knowledge. An aroid is a plant that is a member of the arum family. Our familiar jack-in-the-pulpit (Indian turnip) is a member of this arum family. The arrow-arum and skunk-cabbage are also in this arum (*Araceae*) family.

OUR COMMON AROID OR "INDIAN TURNIP."
(*Arisæma triphyllum.*)
a, flower with spathe turned back; *b*, *c*, two forms of spadix.

This gigantic aroid (*Godwinia gigas*) was described many years ago by Dr. Berthold Seeman in the "Journal of Botany." We quote some of his statements regarding this plant:

"This is the largest aroid, both in leaf and flower, of which we have any knowledge. It was discovered in January, 1869, near to Javali Mine in the Chontales Mountains of Nicaragua, where it grows in broken ground near rivulets (*quebradas*) among brushwood. I have never seen it in any other part of tropical America, but from information lately received I am led to believe that this, or a plant very much like it, is found in the mountains of neighboring Central American republics.

"The root-stock, with its whorl of roots, turned topsy-turvy, much resembles an old man's head, bald at the top; in the two specimens dug up it was 2 ft., 2 in. in circumference and weighed from 90 to 92 ounces. There are no roots whatever in the lower part of the corm, which is perfectly smooth and white; all are placed in a whorl around the top, and between them many young corms are nestling. The plant has only one leaf at a time, and after that has died off the flower-spathe makes its appearance, both being of gigantic dimensions. The petiole (of the largest specimens measured in Nicaragua) is 10 ft. long and 10 lines in circumference, covered with minute spiny projections, and with a metallic beautifully mottled surface (brimstone yellow, barred and striped with purple), giving it the appearance of a snake standing erect. The blade of the leaf (which is green on both sides) is 3 ft. 8 in. long, so that the whole leaf is 13 ft. 8 in. long (Engl. measurement). The blade is divided into three primary sections, which are again repeatedly subdivided, the extreme divisions being ovate-acuminate. The peduncle (stem) is 3 ft. long, and 4 in. in circumference, mottled, and with minute spiny projections as the petiole, and furnished toward the base with several large bracts. The flower-spathe is the greatest curiosity, measuring as it does 1 ft. 11 in. in length, and 1 ft. 8 in. in width. It is of a thick, leathery texture; outside of a dark bluish brown, and inside of a dark brownish red, with the exception of the base and those parts surrounding the spadix, which are whitish yellow. The spadix is only 9 in. long, and nine lines across."

When this account of the huge jack-in-the-pulpit was first published in England, it was believed that the statements were untrue or greatly exaggerated. It furnished a subject for articles in humorous papers ridiculing the "so-called dis-

THE GIANT "JACK-IN-THE-PULPIT."

covery." Later, seeds were sent, the plants raised, and the accuracy of the statements proved.

A GIANT FLOWER FROM THE TROPICS

These remarkable flowers of the pelican-plant were drawn from specimens at the Bronx Park greenhouses, in New York city. High up under the glass roof they bloom in all their tropical luxuriance from stems which have climbed there, twenty feet or more into the air. Even at that height the form and size of the flowers appear to be most remarkable, but it is only on a nearer view that we fully appreciate their wonderful structure. The principal flower in the illustration measured eighteen inches in height, while the depending ribbon-like tail was thirty inches longer, making a total length of forty-eight inches! The width of the flower at the time of its fullest expansion was twelve inches, so that we can form some idea of the astonishing size of this, the second largest flower in the world.

The coloring and structure of the flower are as remarkable and unusual as its dimensions. The rounded opening in the middle is surrounded by a coloring of deepest purple, while veinings and splashes of lighter purple spread outward over the concave surface of the flower, gradually diminishing in intensity as they approach the margin. As the great blossoms hang on the vines against the green leaves they resemble calico sunbonnets hung up to dry. This likeness to a hat or fantastic bonnet is so striking that we are not surprised to learn how the children use the flowers as caps in play, in the countries of Central and South America where this plant grows.

THE NECK OF THE FLOWER CUT OPEN.
The tube-like passage is shown which leads out to freedom, and the flies lodged in the cavity or pocket above it.

Having placed one of the flowers on the head of a young girl and photographed it to show its fitness for the purpose, we see that now it becomes a head-dress of real beauty and dignity, resembling a Greek soldier's cap; or that helmet which Pallas Athene, the Greek goddess of wisdom, wears as a symbol of her power and protection.

THE PELICAN FLOWER ON A GIRL'S HEAD.
This is the way the children of Central and South America wear them for hats in play.

Let us examine the flower more carefully. If we place our ear near the opening, a rasping and harsh buzzing noise will be heard. It sounds as if something alive were moving about inside. What is it? If we had watched the flower during the day, flies would have been seen to enter, and it is their buzzing and struggling that we hear; for, having once gotten in, there is a trap-like arrangement in the neck which prevents

their escape. We slit up the neck with a knife, spread the sides apart and see a great number of the insects crawl out and fly away. Examining the trap we see that it is formed like an eel-pot. The opening of the flower narrows in the neck to a small tube which projects down into the larger chamber near the stem. This chamber reaches up around the neck of the tube in a deep recess and into this pocket the insects fly and crawl about, until they die or by chance find the central opening below them.

The name of pelican-plant is given because of the peculiar bird-like form of the bud. It is interesting to know that the plant has smaller relatives in the Canada ginger and Dutchman's pipe which are found in the Northern States.

Perhaps many of my readers care little for the scientific names of our native plants, when they seem so long and burdensome,—but the pelican flower is so big and such a notable visitor to our shores that we should learn its true and appropriate title. So, when you go to the New York Botanical Gardens in the Bronx, New York, and enter greenhouse No. 4, ask to see the *Aristolochia grandiflora Sturtevantii,* which is open during the months of July, August, September and October to receive its winged and other guests.

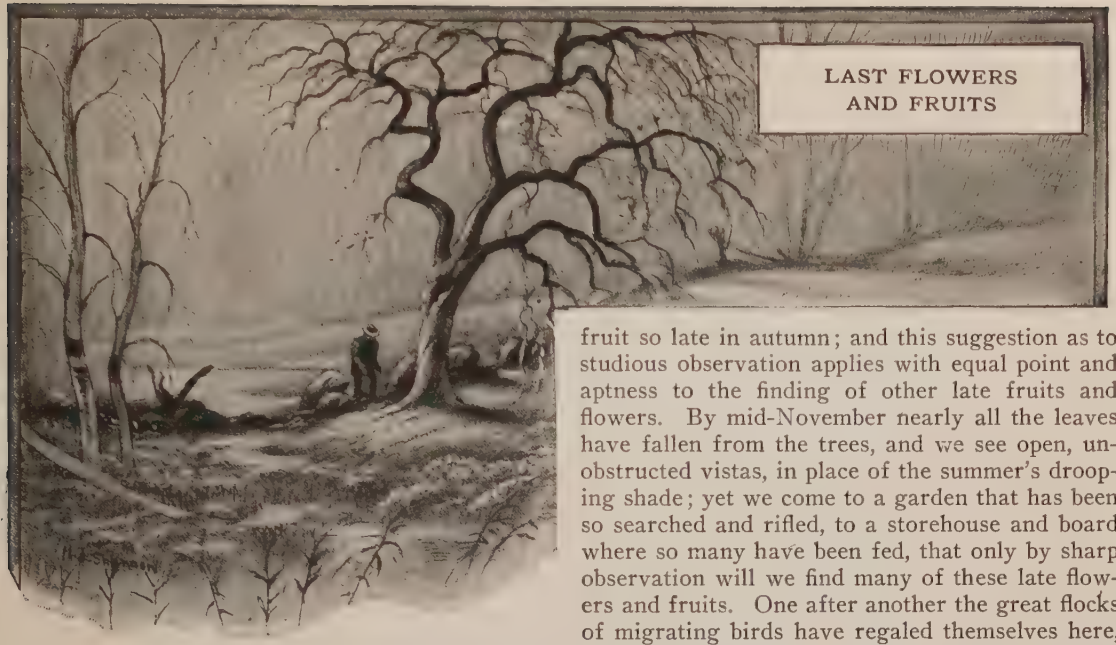
ENGLISH SPARROWS IN THE SNOW-COVERED BRANCH OF A PINE TREE.

The birds are all social and gregarious in winter, and seem drawn together by common instinct.
JOHN BURROUGHS.

WHERE BIRDS SLEEP IN WINTER

IN zero weather, when the night is pitch-dark and there is a piercing wind driving a biting snow, perhaps you have wondered, as I have, to think how the little wild birds could manage to sleep and not freeze, nor be covered up with the snow.

One stormy winter night, while walking through Central Park, New York city, I partly answered the question. A branch of a large pine-tree swung close to, and a little above, a street-lamp. The branch and its twigs were quite free from snow, the dense leaves or "needles" forming a roof above them and catching the snow which had quickly filled up the spaces between the slender leaves. Here and there, under the most cozy-looking of the leaf-clusters, was a little group of English sparrows looking as comfortable as could be. They were somewhat disturbed by my pausing to watch them, and a few left to find a perch on some higher branch. Probably there were scores of these sparrows in this tree; for I was able to examine only the branch near the light. Who knows but that every pine in the park, and many a one in the woods as well, is a very tenement for the birds?



LAST FLOWERS AND FRUITS

But still, if you are a skilful gleaner, you may get many a pocketful even of grafted fruit, long after apples are supposed to be gone out-of-doors. I know a Blue-Pearmain tree, growing within the edge of a swamp, almost as good as wild. You would not suppose that there was any fruit left there, on the first survey, but you must look according to system.—Thoreau.

In the above quotation from Thoreau's essay on "Wild Apples" the author suggests to us how careful must be our search if we would find the fruit so late in autumn; and this suggestion as to studious observation applies with equal point and aptness to the finding of other late fruits and flowers. By mid-November nearly all the leaves have fallen from the trees, and we see open, unobstructed vistas, in place of the summer's drooping shade; yet we come to a garden that has been so searched and rifled, to a storehouse and board where so many have been fed, that only by sharp observation will we find many of these late flowers and fruits. One after another the great flocks of migrating birds have regaled themselves here, and found a sufficiency to sustain them in their long southward journey, and few indeed have been the berries and fruits to escape their sharp eyes. While these feathered guests were feeding in the trees, the squirrels and mice were just as busily gathering their winter store beneath, and later came the frost to take what these had left. The keen winds withered the apples where they hung, broke down the stalked berries and fruits, and coldly touched the lingering flowers of October until they paled, one by one, sank down to earth and gradually resolved themselves into the elements again. So, like gleaners, we come to this field of nature, so often harvested, to gather in, by thought and by vision, if not with our hands, the last lingering fruits and flowers.

THE CLOSED GENTIAN.

The closed gentian blooms now in company with its more admired and notable sister, the fringed gentian, and we may feel inclined to choose this peculiar flower with its unopened petals, with its apparently belated and therefore incomplete blossoming, as especially expressive and typical of the season. Here, too, is the royal aster company, blue and purple, violet and pale lavender, gathered in feathery masses along the roads, or girdling the woods around with their banked and profuse luxuriance. The beauty that these flowers confer upon the late autumnal fields is peculiar to this country, for England owns but one native aster. Only in her gardens do the asters bloom in profusion, and there they are the American variety,—just such gold-centered, purple blossoms as we see about us to-day.

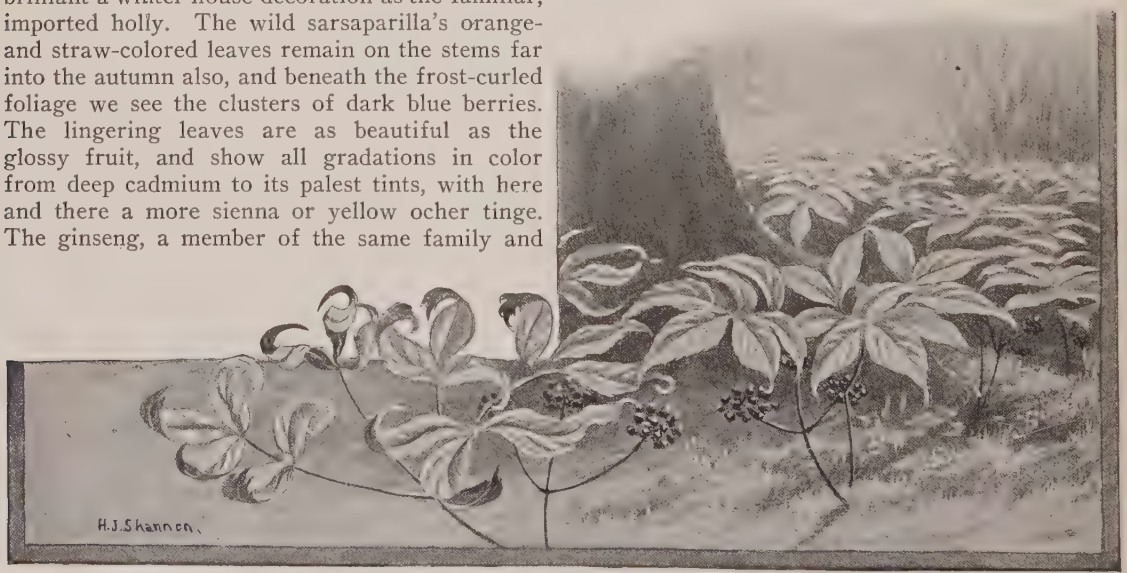
THE BLACK ALDER IN FRUIT.

LATE PURPLE ASTER.

RUNNING STRAWBERRY-BUSH IN FRUIT.

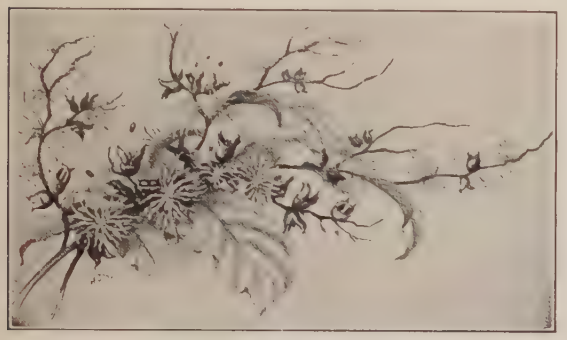
As blue is the keynote of the late autumn flowers, so crimson and scarlet are the prevailing colors among fruits. The strawberry-bush's crimson capsule splits open to expose and discharge its scarlet-covered seeds; and, whether we examine the strawberry-bush proper or the creeping variety, we will find the same brilliant coloring. High in the trees, and draping the thickets, are the bittersweet berries, equally bright with scarlet and orange tints, while the alder stems are decorated with their bright red berries also. If the green leaves persist until late fall, as they often do, a stalk of this shrub forms as fitting and brilliant a winter house decoration as the familiar, imported holly. The wild sarsaparilla's orange- and straw-colored leaves remain on the stems far into the autumn also, and beneath the frost-curled foliage we see the clusters of dark blue berries. The lingering leaves are as beautiful as the glossy fruit, and show all gradations in color from deep cadmium to its palest tints, with here and there a more sienna or yellow ocher tinge. The ginseng, a member of the same family and of somewhat similar habit of growth, has berries of a brilliant red, and so this family, as well, continues the scarlet theme that runs through so many of the autumn fruits.

How intimately these late growths, particularly the flowers, reflect the spirit of the season! The spring flowers so perfectly suggest their season that a stranger, without knowledge of the time which gave them birth, would still, by the appearance of the blossoms, associate them with the spring months. The prevailing color being white with pink and purple flushes, or faint and delicate blue, is certainly suggestive of the dawn and of



THE WILD SARSAPARILLA IN FRUIT.
The berries are so well liked by birds that they are seldom found in quantities.

the opening year, while the autumn tints and shades are suggestive of the later time, of the sunset and afterglow. This is true also of the rich red cardinal-flower which comes in late summer and is deepest in hue of all the wild flowers we shall find upon our jaunt.



THE WITCH-HAZEL IN BLOOM.
The capsules also split open now and shoot out the seeds.

The goldenrod's prevailing orange is surely a reflection of our autumn sunsets, and the blue asters deepening to purple answer to the bars of rain-cloud that accompany them. In the gentians this color deepens until in the closed gentian it is so full and significant as to symbolize the darkening twilight of the year, the storm blue of the approaching night-clouds; while the yellow, filmy stars of the witch-hazel, which come still later, to close the floral season, are the faint lines of light, the last yellow gleams that break low on the horizon before night and winter wholly close down. HOWARD J. SHANNON.

TREE FLOWERS OF SPRING

THE first noticeable and beautiful flowers of spring, with but few exceptions, bloom near the earth on low growing stems, and only when May has come with milder airs and less boisterous winds do the trees expand their flowers.

Then, the apple-orchard's rose-colored domes surround the barn's gray gable like billows of sunrise-tinted clouds drifting about some granite mountain peak; while separate trees, like detached wreaths of vapor, hang poised above the plowed fields and distant meadows.

The spreading creamy flower-heads of the black-haw decorate the borders of the green lanes and the roadside thickets, while against the misty purple woodlands the dogwood spreads its wide white shelves of bloom. These are the showiest blossoms of the season, but every other tree has its equally characteristic and equally interesting flowers.

Here swamp oaks tower high into the air above us; and, as our eyes penetrate the shifting, shimmering mass of bright green foliage,

FLOWERS OF THE BLUEBERRY.
The urn-shaped bells suggest the form of the fruit.

that at first is all that we see. Soon, however, tossing yellow tassels are seen, swinging from all the branches, and these minute florets clustered on slender threads are the oak-tree flowers. The scarlet oak has somewhat larger but very similar tassels, and as this form of blossom

FLOWERS AND YOUNG LEAVES OF THE SASSAFRAS.
The sulphur-yellow flowers appear with the young leaves.

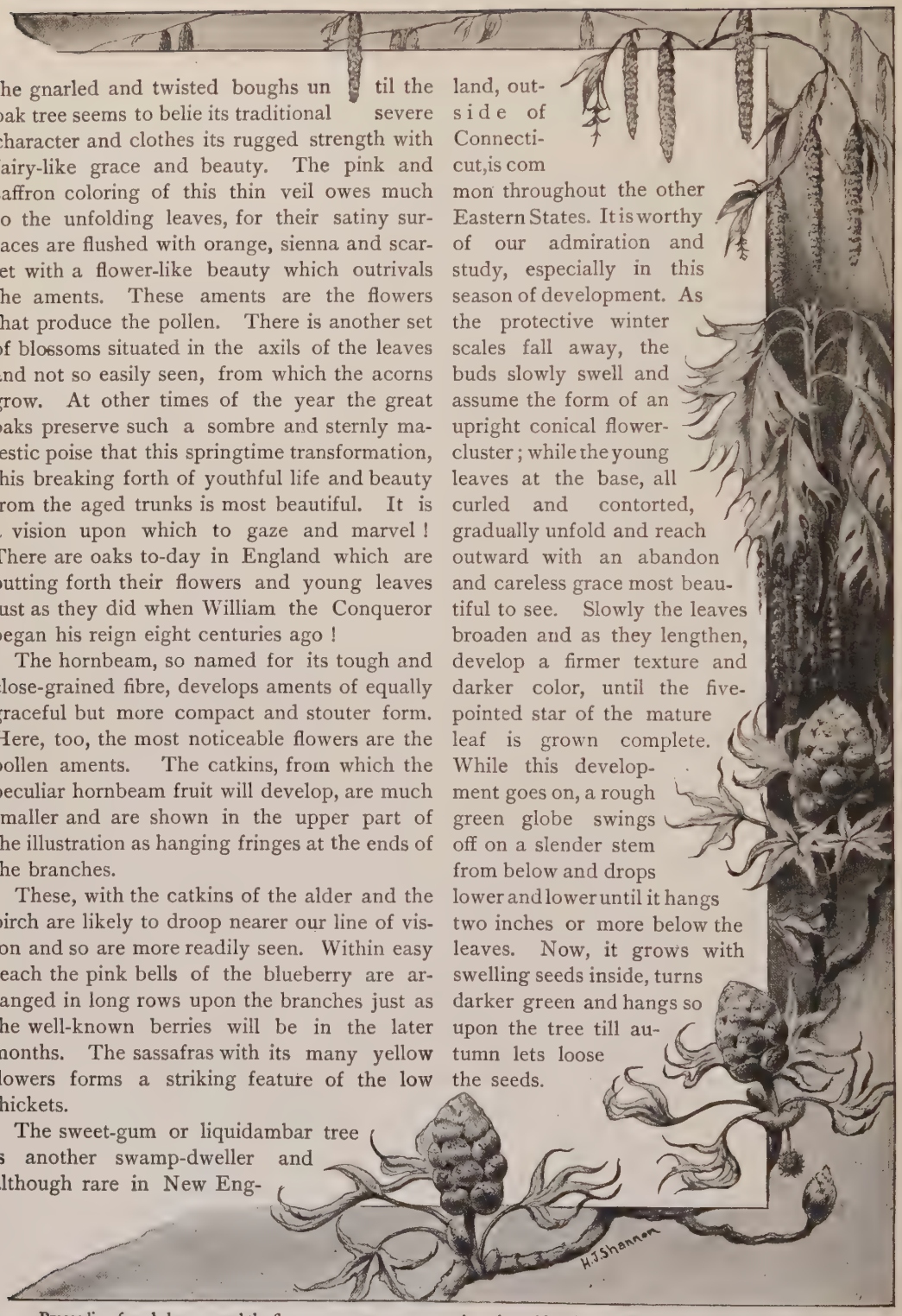
—the ament—is characteristic of the entire family, we would do well to remember the botanical name. These drooping fringes veil

the gnarled and twisted boughs until the oak tree seems to belie its traditional severe character and clothes its rugged strength with fairy-like grace and beauty. The pink and saffron coloring of this thin veil owes much to the unfolding leaves, for their satiny surfaces are flushed with orange, sienna and scarlet with a flower-like beauty which outrivals the aments. These aments are the flowers that produce the pollen. There is another set of blossoms situated in the axils of the leaves and not so easily seen, from which the acorns grow. At other times of the year the great oaks preserve such a sombre and sternly majestic poise that this springtime transformation, this breaking forth of youthful life and beauty from the aged trunks is most beautiful. It is a vision upon which to gaze and marvel! There are oaks to-day in England which are putting forth their flowers and young leaves just as they did when William the Conqueror began his reign eight centuries ago!

The hornbeam, so named for its tough and close-grained fibre, develops aments of equally graceful but more compact and stouter form. Here, too, the most noticeable flowers are the pollen aments. The catkins, from which the peculiar hornbeam fruit will develop, are much smaller and are shown in the upper part of the illustration as hanging fringes at the ends of the branches.

These, with the catkins of the alder and the birch are likely to droop nearer our line of vision and so are more readily seen. Within easy reach the pink bells of the blueberry are arranged in long rows upon the branches just as the well-known berries will be in the later months. The sassafras with its many yellow flowers forms a striking feature of the low thickets.

The sweet-gum or liquidambar tree is another swamp-dweller and although rare in New England, outside of Connecticut, is common throughout the other Eastern States. It is worthy of our admiration and study, especially in this season of development. As the protective winter scales fall away, the buds slowly swell and assume the form of an upright conical flower-cluster; while the young leaves at the base, all curled and contorted, gradually unfold and reach outward with an abandon and careless grace most beautiful to see. Slowly the leaves broaden and as they lengthen, develop a firmer texture and darker color, until the five-pointed star of the mature leaf is grown complete. While this development goes on, a rough green globe swings off on a slender stem from below and drops lower and lower until it hangs two inches or more below the leaves. Now, it grows with swelling seeds inside, turns darker green and hangs so upon the tree till autumn lets loose the seeds.



Proceeding from below upward the flowers are: sweet gum, scarlet oak, and hornbeam. The small pistillate aments of the hornbeam are shown at the branch ends above.

THE ARROW ARUM (PELTANDRA VIRGINICA) GROWING IN THE SWAMP.

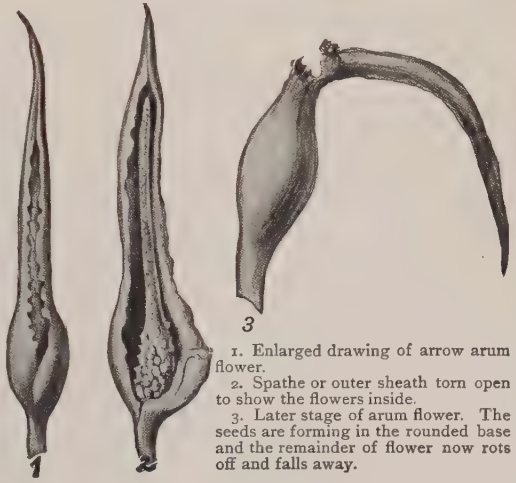
SOME SWAMP-FLOWERS OF JULY

The young feet have come now to the very threshold of the temple, and fortunate are they if there be one to guide them whose heart still speaks the language of childhood while thought rests in the great truths which come with deep and earnest living. Childhood is defrauded of half its inheritance when no one swings wide before it the door into the fairyland of Nature; a land in which the most beautiful dreams are like visions of the distant Alps, cloudlike, apparently evanescent, yet eternally true; in which the commonest realities are more wonderful than visions. How many children live all their childhood in the very heart of this realm, and are never so much as told to look about them. The sublime miracle play is yearly performed in their sight, and they only hear it said that it is hot or cold, that the day is fair or dark!

—HAMILTON WRIGHT MABIE.

SUCH a splendid floral company is formed in the lowlands at this season, by the red Turk's-cap lilies, sunflowers, and lobelias which gather along the shore; and by the white and yellow pond lilies which float out upon the still water, that less conspicuous flowers are likely to pose unnoticed.

The arrow arum's green sheath is so uninviting that we have doubtless passed it many times as an object incapable of affording either interest or pleasure. Yet, like many another inconspicuous flower, the green arrow arum (*Peltandra Virginica*) is distinguished by very peculiar and interesting habits and as we watch it through the summer months, some remarkable movements will be seen to take place. The green sheath or spathe is so closely folded about the spike of flowers that, if we were not acquainted with its nature, we would be apt to wait for a further unfolding before beginning our study. This, however, would be a mistake, for the ruffled edges spread no farther apart than is shown in the illustration. If we wish to examine a flower in detail, and we must do this in order to understand its later development, then, it is necessary to tear the outer sheath apart. This has been done in the sketch marked 2, where we see the inner cream colored spike, covered for most of its length with flat, disc-like shields. These discs hold the staminate flowers beneath their irregular edges, while the group of berry-like projections at the stalk's base are the pistillate flowers and will develop into the seeds.



1. Enlarged drawing of arrow arum flower.
2. Spathe or outer sheath torn open to show the flowers inside.
3. Later stage of arum flower. The seeds are forming in the rounded base and the remainder of flower now rots off and falls away.

A transformation of the entire structure takes place as the seeds begin to grow. The sheath's edges at the base slowly approach each other,

FURTHER DEVELOPMENT OF THE ARROW-ARUM.

The rounded base of the sheath with its contained seeds bends downward until it resembles a snake's head thrust forward as if to strike. The likeness increases as the stem bends; the head leans lower and lower and finally deposits the seeds upon the muddy bottom.

and, as they develop, clasp the young seeds safely and tightly inside, while at the same time the upper part of the spathe with its contained spike of withered flowers begins to rot and fall away. This decay takes place down to a point just above the rounded base, upon a line as clearly defined as if it had been previously marked and determined. This stage of growth is complete by the last of June or early July and the seed-receptacle now looks like illustration 3 on the preceding page.

Gradually the supporting stalk leans away from the perpendicular and, at the same time, the rounded seed-holder bends itself still more sharply downward, until it looks like the first figure of the four above shown. It resembles a snake's head thrust forward as if about to strike. This likeness increases, for the head leans lower and lower with the inclining stem, and, as the seeds enlarge, the sheath's edges, which have been so tightly clasped, now gape wider and wider, mouthlike, until the ripened seeds are cast out upon the muddy bottom. This growth is very slow and extends over the entire summer and autumn. The stage which is shown third in the above series is not reached until the middle of August, while the final act of seed-scattering takes place in the middle or last part of September.

The column of emerald foliage which the false hellebore rears above the swamps and creeks in spring is one of the most beautiful features of the opening season. Its flowers, however, which open in May and continue to bloom even into July, are much less conspicuous and are rarely noticed. It almost seems as if the plant had put all its effort and vigor into the perfecting of its lustrous foliage and so had been unable to prepare flowers which would fittingly crown the lofty stem. Even so they form most decorative features in the dense mid-summer swamps and lift their dull green or yellowish flowers seven feet or more into the air. This great plant is packed away during the winter in a large conical bud, which reposes just beneath the surface of the swamp. Covered with long bristly hairs it successfully withstands the cold and takes the first encouraging spring days as a sign to push upward and expand. Like its neighbor, the swamp-cabbage, the false hellebore or Indian poke is poisonous to taste both in its leaves and root; so, although we can admire at a distance, we should avoid a close acquaintance.

THE FALSE HELLEBORE GROWING IN THE SWAMP.

On account of their green color the flowers are not likely to attract general attention.

The bluish-purple spikes of the pickerel-weed decorate the swamp borders and are lifted above the shallow water along the shore. Although

THE PICKEREL-WEED IN BLOSSOM.
These purple flowers are visible all through the summer.

these blue flowers appear in June and may be seen even in late September, the individual blossoms last for only one day, and the long floral season is made possible by the succession of new flowers which open each morning. Here, too, the brilliant swamp-milkweeds overlean the bank and allow their bright orange and scarlet reflections to shine in the still water. The purplish rose-colored spikes of the false dragon-head or obedient plant will attract us by the peculiar trick they have of swinging about on the stem as the wind blows, so as to present their mouths or heads in the opposite direction. Very shy dragon-heads they certainly appear to be, for any child can blow upon them until they turn timidly away, and obediently remain there on the opposite side of the stalks. It has been suggested that this habit of turning away from the wind is useful to the plant, particularly in stormy weather, as the flower openings are then preserved from the rain and kept dry.

It has been suggested also that on fair days the flower turns to leeward so as to present its gaping lips in sheltered position where insects can best alight. Perhaps our young folks will observe and give their explanations. Scientists are rather in doubt as to the reasons.

Many other obscure and little-noted plants have unusual activities; such as the eel-grass (*Vallisneria spiralis*) which springs from the pond-bottom and separates its submerged staminate flower from the parent stem that it may rise to the surface and scatter its pollen there. Indeed, it would seem as if those plants which lack beauty and attractiveness—the worthless and obscure—are gifted with some remarkable faculty, some strange and exceptional life custom, that we may realize how the forces which are at work in the earth to-day are as ordered and wonderful as those which determine the revolutions of the stars. HOWARD SHANNON.

HOW TO KNOW OUR ORCHIDS

WHAT is an orchid? To many, the name suggests only those eccentric flowers which perch upon the trees of tropical forests in such strange form and glowing colors as to rival the painted plumage of the birds. But we need not go to foreign countries to know this interesting family, for there are over fifty species native to the United States. How shall we know them then? What is an orchid?

One peculiar feature is the great irregularity in form; for, although their parts are arranged in threes, these parts are not in symmetry. One strangely formed petal is called the "lip" and may be expanded into a pouch, delicately fringed, or brightly marked and covered with bristles. Sev-

THE HABENARIA GROUP.
A spire of the white-fringed orchis (*H. blephariglottis*) is shown in the center, and at the left two views of a single flower showing its strange form, fringed lip, etc. To the right of center the first flower is from a spike of the purple fringed orchis, and the other from the ragged fringed orchis.

eral forms of the lip are shown in the small sketches which are drawn on or with the larger

ROSE POGONIA OR SNAKE-MOUTH, AND ENLARGED FLOWER.

SINGLE FLOWER OF ARETHUSA.

The small white moccasin-flower is also to be found on wooded hillsides, but only by rare good

THE GRASS-PINK, LIMODORUM TUBEROSUM.
With its spire of flowers and a single flower. Notice the queer, upraised lip.

pictures. The great feature of the family, however, is the joining of stamens and style upon one support which is called the column. By this structure the pollen and stigma are brought into a peculiar relation with each other; a relation which makes possible a more perfect and remarkable system of cross-fertilization by insects than can be found in any other family. Other differences might be noted, but we see already that the orchids are a highly organized family and possessed of exceptional interest.

Let us glance at a few of the most beautiful. The lady's-slipper group (*Cypripedium*) naturally attracts us first because of the size and fame of its members. First of all is the showy moccasin-flower (*C. reginæ*) and entirely appropriate is the Latin name which signifies queenly attributes. This regal flower has none of the wayside blossom's familiarity, but rears itself about the hemlock-shaded pools of deep swamps and above the bog-lands on remote hillsides. By the middle of June these secluded haunts may be searched with confidence, and the tangled thickets and treacherous bogs along the way are forgotten when we see, against the dark background of evergreens, the white-fluted pouches and spotless petals of this orchid depending from their leafy stems.

The pink moccasin-flowers may be found on dry hillsides, but they also grow in cool, shady woods. What a picture they make, when the dim light filters down through the heavy foliage of forest solitudes and discloses to us a group of these pink-veined globes nodding above some deep spring, which reflects, tremblingly, their bright forms!

In drier woods we find the large yellow moccasin-flower and the small yellow, which looks like the first, but rarely grows over an inch long. fortune will the ram's-head (*C. arietinum*) reward our search. It is most grotesque with its sac-like, dependent pouch, and so rare that its habits are unknown.

The orchis group, bearing the name of the family itself, has only two members in the United States. They might have been described first if we consider the time of flowering, for the showy

THE ARETHUSA BULBOSA IN THE MARSHES.

orchis (*O. spectabilis*) often appears by the twentieth of April. The lip in this group has wavy margins and is prolonged behind into a spur for nectar. The stalk of the showy orchis rises between two glossy, green leaves to the height of twelve inches and often bears six beautiful, pale purple flowers, nearly an inch long.

The *Habenaria* group has an arrangement of many small flowers clustered on a tall spike or wand. The lip is often deeply cut or fringed, and the color may be white, yellow, rose purple, or green. Usually they keep to the deep swamps and bogs, although the finest specimens of the purple fringed orchis ever seen by the writer were growing beside a dusty road. The purple fringed

THE RATTLESNAKE-PLANTAIN IN THE EVERGREENS.
A single flower is shown enlarged in the sketch.

orchis often grows five feet tall, and its feathery mass of bloom forms a superb and decorative feature of the August swamps.

The *Pogonia, Arethusa,* and *Limodorum* groups grow along grassy lake shores and among the shimmering sedges of our marshes in June. The *Pogonia* group is represented by the rose-pogonia or snake-mouth, whose rose-colored blossom nods on a slender, grass-like stem, nearly twelve inches high. The drooping, bearded lip gives the flower its scientific name. The larger flowered and deeply purple *Arethusa bulbosa,* with its richly splashed and crested lip, is the beautiful and only member of the *Arethusa* group. The flowers are borne singly on the stems while in the *Limodorum tuberosum* an angled stalk bears a spire of from three to fifteen delicate lavender blossoms. This orchid is set apart by the peculiar position of the lip, which is raised above the flower instead of

THE LADY'S TRESSES GROWING ON THE HILLSIDE.
The two nearest spires to the left are Gyrostachys cernua while the other more slender ones are the Gyrostachys gracilis. The enlarged single flower is that of G. cernua.

hanging below it, as in all other members of the family.

The perennial rosette of the rattlesnake plantain with its white-veined leaves is familiar to us all, but the flowers are not so well known. When found and examined the spike will show a gathering of many small, round-bodied flowers, having a lip curled up into a sac with its edges turning outward.

Late in the summer the slender wands of the

THE PARASITIC CORAL-ROOT (CORALLORHIZA MULTIFLORA).
An enlarged flower is also shown.

lady's tresses rise from the dry hillsides or wet meadows. Of this group (*Gyrostachys*) we have

seven members, two being very common through the months of September and October. In *G. cernua* the stalk is somewhat twisted and gives the likeness which prompted the name of lady's tresses, but only in the smaller *G. gracilis* is this feature clearly seen. In this plant the white flowers seem to be mounting a winding stair as they twine in graceful spiral upward about the slender stem. These two varieties often grow in the same situations.

Briefly we have glanced at a few of our orchids. Only mention can be made of the other groups: the rare *Epipactis* with its queer, swollen lip; the *Listera,* also called twayblade; *Achroanthes,* with its graceful white and greenish flowers; the *Corallorhiza,* or coral-roots, with their parasitic habits; the rare *Hexalectris; Leptorchis,* of unknown habits; *Calypso,* whose pouched lip once grouped it with the lady's slipper; the rare *Tipularia;* and *Aplectrum,* springing from a double bulb, which gives the common name of Adam and Eve.

These rare and beautiful American orchids are becoming more rare every year. Heedlessly they are picked in quantities and uprooted by the ignorant, who know nothing of their wonderful structure and the remarkable movements their parts describe to continue the race. Let us, who know them, pledge ourselves to leave them undisturbed in their secluded haunts, so that their queen may reign indeed, so that her faithful servitors, the moths and bees, may freely perform their curious and needful office, and allow this royal race of plants to increase. HOWARD J. SHANNON.

SOME CURIOUS FACTS REGARDING FERNS

ONE must be indifferent indeed who does not admire the ferns. Even the very name brings to mind vistas of graceful, waving fronds with delicate, lace-like foliage.

But while most species may well claim our admiration, some are so unlike our usual conception of a fern as seemingly to justify one in declaring that they must belong to some other race of plants. The walking-fern, as the name implies, possesses a characteristic individuality of its own. The fronds are usually not more than eight to twelve inches in length. They are severely plain, as if to show its disapproval of the frills and fashions of its more aristocratic relatives. Some of the fronds are short and blunt; others are prolonged into a long, slender tip, which bends over to the ground, and at this point, if conditions are favorable, a tiny plant begins to form. After a time, as the young plant grows larger, it becomes detached from the parent, though sometimes the connections remain through two or three generations. It is in this sense that the walking-fern

THE CLIMBING-FERN.
"It much resembles a small hand with chubby fingers."

"walks," though its steps are short and not often taken. It grows in rocky woods, chiefly in limestone regions, forming dense mats.

In the climbing-fern we have another distinct phase of fern life. This fern has long, vine-like stems too weak to hold themselves erect, and, therefore, has developed a twining habit, depending on neighboring objects for support. The frondlets much resemble a small hand with chubby fingers, and are arranged in pairs. The spore-bearing part is borne at the tip of the stem in a sort of branching cluster. This fern grows throughout the eastern part of the United States, chiefly near the coast. It is sometimes called the Hartford fern, named for the capital of the State of Connecticut, and a law was passed making it a misdemeanor to pull or uproot a plant in that State.

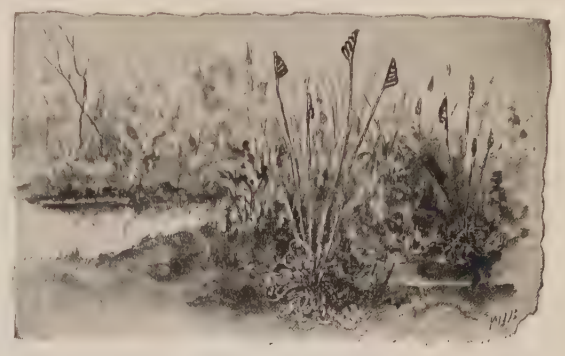
In the appellations "walking-fern" and "climbing-fern" there is a pleasing appropriateness, but to call a harmless little plant an adder's-tongue hints of something odious, as if the plant were possessed of some poisonous property. However, after seeing a specimen of the plant one must admit that, so far as appearance goes, the name is in some degree justified. It has a single stem, usually less than one foot in height, with the spore-bearing portion at the tip, and a single, undivided, elliptical leaf about midway. Beauty and grandeur it has not been endowed with, but for its charming simplicity of form it has few

equals among the higher plants. In fact, when we examine its outlines, we see that it may be fairly represented by drawing two parallel straight lines to represent the stem and two curved lines to represent the leaf. It grows in the grass in wet, boggy places, compelling one to search to find it, and is, therefore, considered a particularly interesting find by fern-collectors.

Closely related to the adder's-tongue are the grape-ferns and the rare moonwort. Most of these plants are too small and inconspicuous for the average person to deign to notice, but of unusual interest and a source of much perplexity to the botanist, owing to their tendency to produce many varying forms. They have the same general habit as the adder's-tongue, but are more

THE ADDER'S-TONGUE FERN.

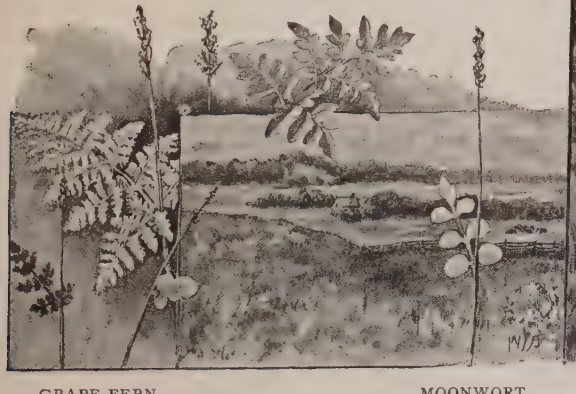
complex in outline. The sterile leaf or frond is often deeply cut and divided, and the spore-bearing portion is branching. The moonwort is more of a British subject than a Yankee, since it is found in but few places south of the Canadian provinces. In the days of superstition it was supposed by some to be possessed of miraculous powers, and an old-time botanist wrote regarding it: "Moonwort is an herb which they say will open locks and unshoe such horses as tread upon it," which shows how deeply those simple folk were impressed by the little mysteries of common



THE CURLY GRASS-FERN.
"So utterly devoid of the usual fern-like characters as to be hardly worthy of the name."

things. The adder's-tongue, grape-ferns, and moonwort are not true ferns, but are so closely allied as to be commonly regarded as such. They grow in pastures and woodlands, some species being quite common and widely distributed.

Vying with the adder's-tongue in point of simple unaffectedness is the curly grass, another small and unassuming species of fern, so utterly devoid of the usual fern-like characters as to be hardly worthy of the name. The unbotanical person would place it among the grasses. The sterile fronds are grass-like and are but one or two inches long. Above these rise several erect stalks, three to five inches in height, with the spore-bearing portion at the top. In this country the only stations known for this plant are in certain boggy lands of New Jersey.



GRAPE-FERN.

MOONWORT.

HART'S-TONGUE.

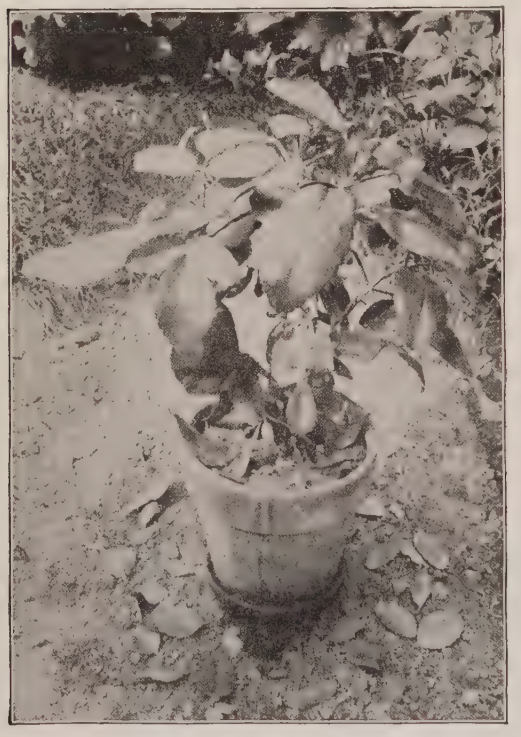
If the various "tongues," so called, could speak, they would, no doubt, protest against the titles

conferred upon them by the botanists. The rarest of these unoffending "tongues" is the hart's-tongue, found in shaded ravines in the States of New York and Tennessee. The fronds are from six inches to two feet in length, somewhat heart-shaped at the base, and undivided. While there is little in their general appearance to suggest a fern, the spore-bearing organs on the backs of the fronds show at once their true relationship.

W. I. Beecroft.

A PLANT THAT GROWS NEW PLANTS FROM ITS LEAVES

Many strange plants and animals thrive in what we call "the tropics," or those regions that extend for a certain distance on both sides of the equator. The tropical air is always warm and damp, so that most plants grow rapidly, and often have surprising habits. Among the strangest is what the botanist calls *Bryophyllum,* a Greek word meaning "sprouting from the leaf." The plant is shown in Photograph 1, as it appears in my garden. The leaves are thick and "fleshy," and have the habit of producing new plants from their edges, so that the young Bryophyllum actually grows out of the old leaves. The plants are abundant in Bermuda, where they often cover and nearly conceal the stone walls, the bronzy green leaves clinging in the crevices, the young sprouts forming little islands of light green amid the darker mass. My specimen (Photograph 1) dropped its leaves on the ground, as there shown, much as other plants may drop their seeds, and where, if undisturbed, they would soon have had young growths along the edges. But I put them in a tub, and covered them with glass, keeping the air warm and moist. Photograph 2 shows what followed. Young plants sprouted from the edges, and in a short time became nearly perfect, as shown in Photograph 3. If allowed to stay on the old leaf, they will not only form roots, but will become full-grown plants.

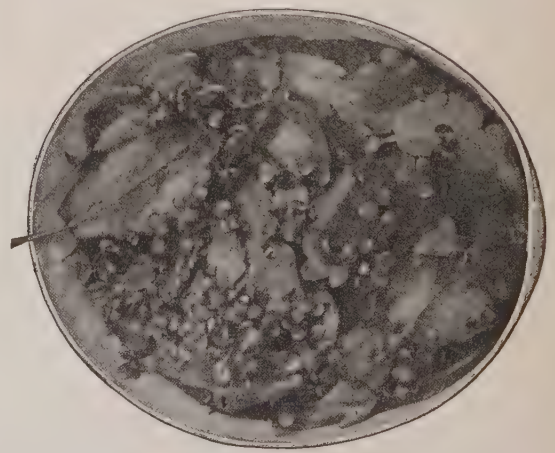


NO. 1—PHOTOGRAPH OF MY PLANT ONE SEASON.
Note leaves scattered on ground, as other plants scatter seeds. These leaves take root on edges and grow to full-sized plants.

A little bog-orchis (*Malaxis paludosa*) found in the marshes of England has a similar habit of forming buds at the edges of the leaves, but this tropical Bryophyllum will live and thrive if only a single leaf be pinned to the wall of a warm, damp room. It is cultivated in Florida, where it is called the "curtain-plant," because it will grow, in its peculiar way, when pinned to the window-curtain.

A botanist friend writes me:

"A plant named *Sedum Sieboldii,* which came originally from Japan, belongs in the same botanical family with *Bryophyllum,* and is often cultivated in our northern gardens, where it will live unharmed by our cold winters. This, to a certain extent, has a habit similar to that of its tropical relative. The edges of its leaves will not sprout, but I have had a dry and apparently dead stem produce young plants after it had been hung on the wall of my library. At intervals, along the stalk, little green objects, looking like



No. 2—The leaves which were found on the ground were put in a shallow tub and covered with glass. The small plants can be seen sprouting from the edges of all the leaves.

No. 3—Near view of the small plants growing from edge of leaf.

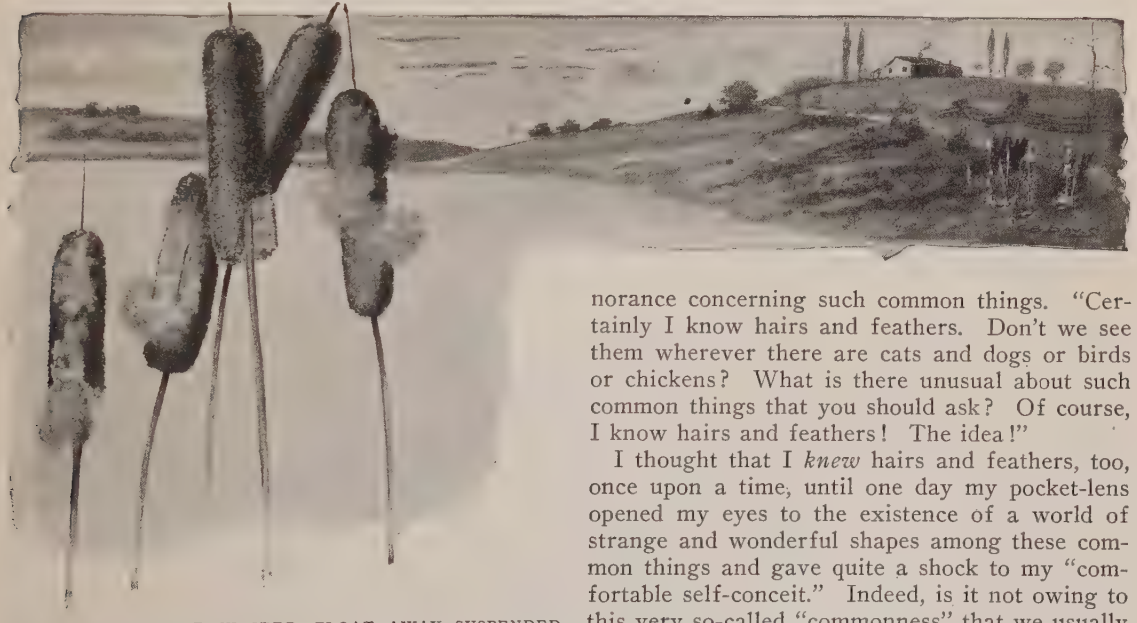
small cabbages as much as anything, grew out, and produced delicate, colorless rootlets in the air, while still clinging to the apparently dead stem. These 'cabbages' either fell off, or I picked them off, and when only laid on the earth, developed into plants like the old ones. All apparently dead Sedum will form similar 'cabbages,' if it is thrust into a pot, and kept warm and moist in the house. But Bryophyllum from Bermuda is perhaps the most interesting. Still, if you can get a sedum-stalk, its conduct will surely please you. The sedum-plants grow in luxuriant bunches, and form dense clusters (cymes) of purple flowers late in the summer. The flowers of Bryophyllum are also purplish."

Professor L. H. Bailey states that "the leaves of the Bryophyllum are sour in the morning, tasteless at noon and somewhat bitter toward night. This change has been attributed to the absorption of oxygen at night and its disengagement in daylight."

Both the Bryophyllum and Sedum can be obtained from the florists. I intend to experiment with them this coming season. Will our young readers please do the same? A few of those most interested might then "compare notes" as to their successes and discoveries.

HAIRS AND FEATHERS

SHOULD you be questioned as to whether you are familiar with hairs and feathers you would probably be indignant at the suggestion of your ignorance concerning such common things. "Certainly I know hairs and feathers. Don't we see them wherever there are cats and dogs or birds or chickens? What is there unusual about such common things that you should ask? Of course, I know hairs and feathers! The idea!"



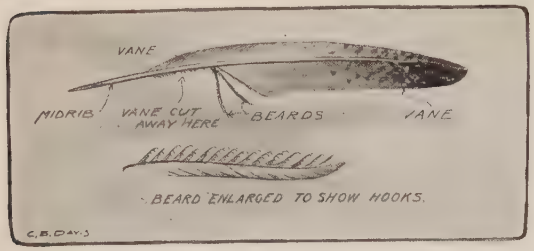
CATTAILS WHOSE TINY SEED FLOAT AWAY SUSPENDED FROM A TUFT OF MARVELOUS HAIRS, EACH ONE OF WHICH IS ITSELF COMPOSED OF A BUNDLE OF HAIRS LOOSELY HELD TOGETHER.

I thought that I *knew* hairs and feathers, too, once upon a time, until one day my pocket-lens opened my eyes to the existence of a world of strange and wonderful shapes among these common things and gave quite a shock to my "comfortable self-conceit." Indeed, is it not owing to this very so-called "commonness" that we usually disregard them as undeserving of notice?

Hairs are found on almost everything that grows, and, if we may so call the fine fibers of asbestos, they even invade the mineral world. From a piece of mineral asbestos quarried from the earth and looking like a stone with a satiny

fracture, the silken fibers can be rubbed with the finger till the lump is worn away.

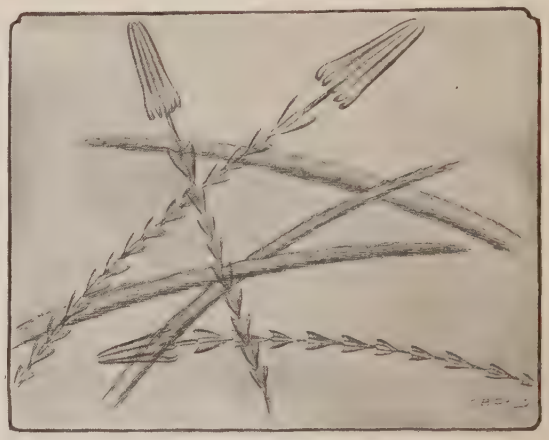
Of course, there are hairs that are simply slender, tapering shafts. From this form arise modifications for special purposes, and their variety of form and structure is almost endless.



FEATHER FROM WING OF CHICKEN, SHOWING ITS MINUTE STRUCTURE.

It is in a deeper spirit of curiosity that I now search among these "common things," for one never knows what new and unexpected form the tiny glittering eye of the microscope will show him. A magic tube it is in very truth, through which one looks into a world of marvel at things that are so close, yet so exasperatingly beyond our reach however much we may desire to handle them.

Perhaps the very last thing the accompanying pictures would suggest would be hairs. Such a collection of "spear-heads" and "mouse-tails" as we find in the next drawing would scarcely be taken to represent hairs. But such they are, nevertheless. They are from the larva of a very common little beetle. He belongs to the tribe of der-



HAIRS FROM LARVA OF DERMESTID BEETLE.

mestids and needs no introduction to those of you who have tried to keep insect collections. The next one of these larvæ you find, make him pay for his board and keep by putting a little balsam on a slide and dabbling him in it. You cannot make him stick, but enough of these "spear-heads" and "mouse-tails" will remain to give you perhaps the most interesting slide in your collection.

These hairs are extremely minute, for if the "mouse-tails" were laid side by side it would re-

NO. 1. PAPPUS-HAIRS OF DANDELION-SEED. NO. 2. PRICKLY HAIR FROM DEAD MULLEIN-LEAF. NO. 3. CROSS-SECTION OF PORCUPINE-QUILL SHOWING BRACE-RIBS TO GIVE STIFFNESS. NO. 4. HAIR FROM DRIED COVERING TO HOLLYHOCK SEED-POD. NO. 5. PAPPUS-HAIRS FROM CATTAIL-SEED. ALL GREATLY ENLARGED EXCEPT NO. 3, WHICH IS ONLY SLIGHTLY ENLARGED.

quire about seven hundred of them to reach one inch. With the barbs removed from the "spear-heads," it would require about four thousand of them to reach the same distance. If placed end to end you would need more than a hundred of them. So you will easily see that you will at least need your spectacles to look at these little hairs.

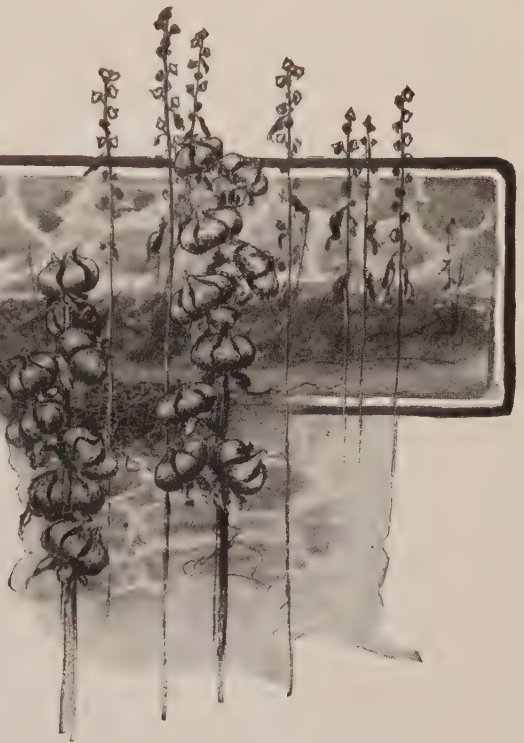
Of course, these are rather tiny, but there are

DRIED SEED-PODS OF MULLEIN.
On the dried leaves on the stalks below are the wonderfully branched hairs.

others that are more easily seen. The strange formation of the "fuzz" on the dried seed-pod of the hollyhock can be easily seen with the ordinary pocket-lens. And what a maze of six-branched hairs we find all over it! Queer things they are, too, with their long, slender arms spreading and sprawling in all directions from the common basal part (No. 4, p. 122). How like they are to a tiny octopus with his stumpy body and long, waving tentacles.

The mullein-leaf is the home of another colony of even stranger hairs. It is the presence of vast numbers of these spiny hairs growing close together and all interlaced that produces the characteristic thick, velvety leaves of this plant. Under your pocket-lens it looks like a field overgrown with brambles—and such thorns! No. 2 (p. 122) shows one of these hairs separated. This leaf is sometimes used by the country girls as a substitute for face-powder when they wish a rosy complexion. Perhaps you can readily understand how a ruddy glow can be produced by rubbing the cheeks with it. Just imagine rubbing your face with a miniature brier-patch. Can you wonder at its effectiveness?

Down in the bog the ragged cattails hold a store of hairs totally different—perhaps yet more wonderful in structure. No. 5, p. 122, shows three of these greatly enlarged. Each hair of the cluster that tops the stem carrying the tiny seed is composed of slender filaments fastened together at intervals along their length by tiny cross-bars from filament to filament. What a wonderfully effective little balloon is this spreading cluster of hairs, and how lightly it bears the tiny seed on its stem till finally one of the many thousands of them that leave a single head settles gently in some frozen bog whose thawing in the spring lets the little seed down into the congenial mud to become the pioneer of a new colony of cattails.



DRIED SEED-PODS OF HOLLYHOCKS.
On the outside of these are the six-pronged hairs.

A search along the windrows on the snow or in the little hollows where the chaff from autumn seeds collects may show you a dandelion-seed with its pappus still adhering. The individual hairs of this are almost straight, but each has a number of spines coming from it as if it had sprouted all along its length. These give more buoyancy to this tiny parachute with the little seed at the bottom of the stem, awaiting a suitable place to land.

So far we have been among the Lilliputians, but at a bound we are in the land of Brobdingnag. In this porcupine-quill we find a giant among the pygmies of the hair-world. It is a hair specialized for the double purpose of bodily covering and defense, and so must be light and strong. It is about four thousand times the diameter of the shafts to the "spear-heads." No. 3 shows how it would appear if you cut one in two and looked at the end of it. The outside of the quill is composed of a substance like horn, and at first glance seems to be finely corrugated. This horny material extends inward in longitudinal ribs that vanish to nothing as they approach the center. The space between the ribs is filled with a very light, cellular substance that greatly resembles very fine soap-suds. When looking at the outside of the quill, it is the dark ribs that give the dark lines and the white material showing through the thinner parts that gives the white lines, producing the effect of a finely corrugated surface. The tip, also, is specially modified. Extending down opposite sides for about an inch are two cutting edges, looking as if the quill had been cast in a mold and just a little of the material had run out into the crack where the edges of the mold had not fitted exactly tight.

The prize, however, for the most highly specialized hair-form seems to belong to the bird family. We call it a feather. The scientists assure us that these are specially modified hairs but are so different from all other modifications of a hair as to be deserving of a special name.

Secure a feather somewhere—it will be much better than a picture—and you will see that it has a main stem or midrib. Along each side of this extends the thin part known as the vane. Look closely and you will see that this vane is composed of a number of tiny feathers called beards, fastened together throughout their whole length from where their bases join the midrib to their tips. You can easily separate one of these from the rest, when you will see how like a tiny feather it is with what seems a fine fuzziness along each edge.

CLEMENT B. DAVIS.

THE BLOOM OF A CENTURY-PLANT

WHENEVER a century-plant blooms it brings forth an astonishing number of inquiries showing how wide-spread is the belief that the plant does not bear flowers until it is a century old.

The name "century" has been applied to these plants from the mistaken belief that they must be one hundred years old before they bloom, a notion probably due to the fact that plants under cultivation in conservatories blossom much later in life than those in their natural surroundings. On the table-lands of Mexico, where they are extensively grown, they flower when they are from seven to ten years old. Century-plants die after flowering.

On warm, sunny days, the flower stalk sometimes grows three and one-half inches in twenty-four hours, and a growth of six inches a day has been recorded. The blossoms, often as many as a thousand in number, are produced on the end

THE CENTURY-PLANT IN BLOOM.
After blooming it dies.

of a long, branched scape, where they cluster to form a panicle, of which the lower branches come into bloom first.

Century-plants are commonly regarded as cacti. This mistake originated from the fact that they have thick, fleshy leaves, which are spine-tipped, and often armed with sharp teeth along the margin. They are members of the Amaryllis family, to which the common garden narcissus and daffodil belong.

Strong and useful fibers are obtained from the leaves, and to-day the poorer classes of Mexicans use them as thatch for their cottages, while vinegar, molasses, and beverages are made from the plants.

The Aztecs also made paper from these leaves, which was of fine quality, and many painted manuscripts, and curious-looking drawings, executed on this paper, are still in existence.

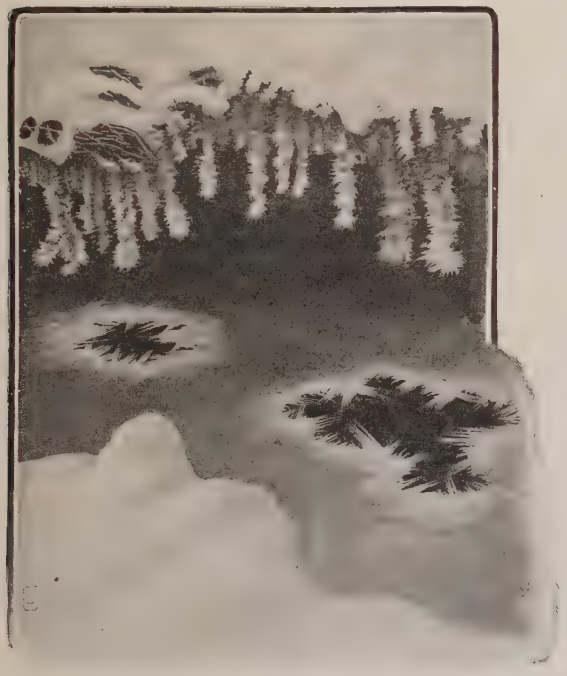
FALL SCENES AND WINTER PICTURES

Water is the most widely distributed mineral. It may be of great *power* in its gaseous (steam) form; of most direct *use* to plants and animals in its liquid form; and of greatest *beauty* of all minerals in its crystal forms (frost, ice, snow, and hail).

JACK FROST'S MINERAL MUSEUM

All nature is usually classified into three kingdoms—animal, vegetable, and mineral. This places water among the minerals, and in character and crystallization it really is a mineral, and it is as a mineral that it is regarded.

It maintains the liquid form at the ordinary temperature before freezing, and the gaseous form at a temperature only a little higher, while with



FROST SPEARS AROUND HOLES IN THE ICE, AND FRINGES ON DRIED GRASSES ON THE BROOK BANK.

most members of the mineral kingdom a very high temperature is required to convert them into a liquid, and a much higher to change them into a gas. The theory of the geologist, who studies the remotest history of the earth, is that all the earth's materials were at one time a gas which gradually cooled and much of it finally became solid. The extreme northern and southern parts of the earth are colder than others. In those places most of this substance we know chiefly as a liquid is a solid mineral, in the form of big fields of ice, and huge floating pieces broken from them and floating southward as icebergs. In our temperate zone we know water for most of the year as a liquid. Except in the winter it is not easy for us to accept it as a crystallized mineral. Then it is in "Jack Frost's mineral museum."

The advantage, as a means of instruction, which this great outdoor museum has over the indoor museum is in the constant changes that take place out of doors. In our cabinets, magnificent clusters of crystals and beautiful samples of isolated gems are arranged in orderly rows, but examining Jack Frost's museum is like looking into a daily turning kaleidoscope, where one never knows what beautiful combination will appear next, and where the same arrangement of gems never appears for a second time. As the artist's cultivated and educated eye examines with joy the images within the kaleidoscope, so the trained naturalist's observing eye with a like joy turns toward "all out of doors" when Jack Frost has command. He is ever turning a wonderful kaleidoscope of crystals. When we discover a form of unusual beauty, we should be careful not to destroy it before we make a photograph or a drawing, or show the jewel to our friends. It will well repay us to use a seeing eye in searching for this transient, ever-changing form of beauty. The best hunting-grounds are the grasses and the leaves, especially those bordering a tiny stream,

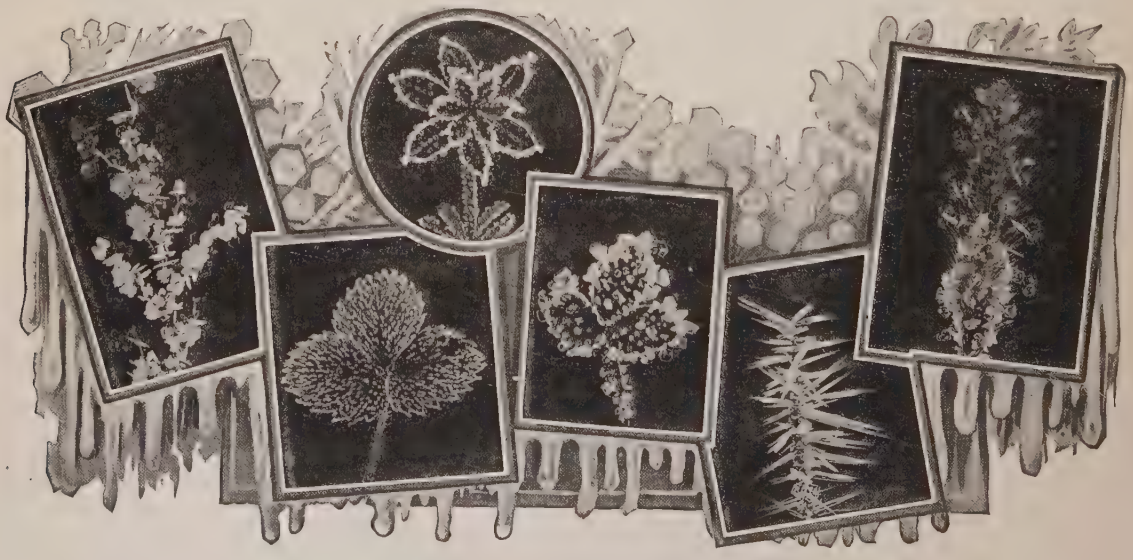
spring, or marsh, where the air contains much moisture, which the cold congeals and attaches in beautiful forms to the smaller bits of vegetation.

We find spears, stars, castles, and indeed may discover almost anything that our fancy may desire, as we examine the margin of brooks, uneven openings in the ice, and the overhanging banks, for Jack Frost often places his best gems in the most secluded and unlikely places.

The effect of the frost is best seen in the early morning, especially on a day that is only moderately cold, or that produces the peculiar chilly sensation that we commonly refer to as frosty. Then a soft, blue mist often merges plant and tree and shrub in a mysterious haze, where, fairy-like, the somber old earth of the day before is changed; all things have become more beautiful; but unless our attention has been especially called to the matter, we are apt to look only at the conspicuous things, and only carelessly at the twigs and the grasses that border the pathway. A little examination of a single grass-blade will reveal the beauty possessed by the frost-crystals. Most of us occasionally observe some particularly striking form; a few examine things more in detail, especially when looking for objects to photograph or to draw; but Mr. Wilson A. Bentley of Jericho, Vermont, has for many years thoroughly examined everything in his vicinity for these beautiful frost forms. The drawings accompanying this article were nearly all from photographs kindly lent by him. It is impossible to record all the fanciful forms that the frost king, as he passes by, tosses on the fence-rails, boards, stones, in holes in the ground, on grass-blades, leaves, spider-webs—in fact, practically on all things whether without or within the home or even the barn, where at times he decorates the hay.

THE DAINTY FROST DECORATIONS OF A SPIDER-WEB ON A BOARD FENCE.

Certain conditions influence the formation of certain styles. As a rule, the great majority of the frost-crystals that form over wide areas in any one night are roughly of the same general type. When the night is warm, and dewdrops form previously to the frost-crystals, the latter are generally of the columnar or needle-like type. When the night is cold, and the frost-crystals form quickly, some other type prevails. It seems that certain conditions tend to produce nearly the



A VARIETY OF BEAUTIFUL FROST FORMATIONS ON GRASSES AND LEAVES.

same types of frost-crystal, but the field of study is too vast and has been too slightly investigated to be thoroughly understood. We do not know

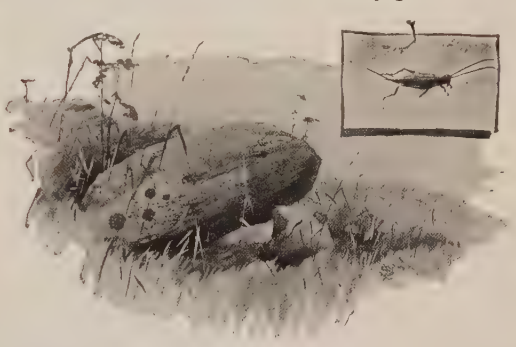
BEAUTIFUL FORMATIONS OF MOSS-LIKE CRYSTALS.

why certain forms follow certain conditions, nor what these conditions are.

NOVEMBER CHEERINESS

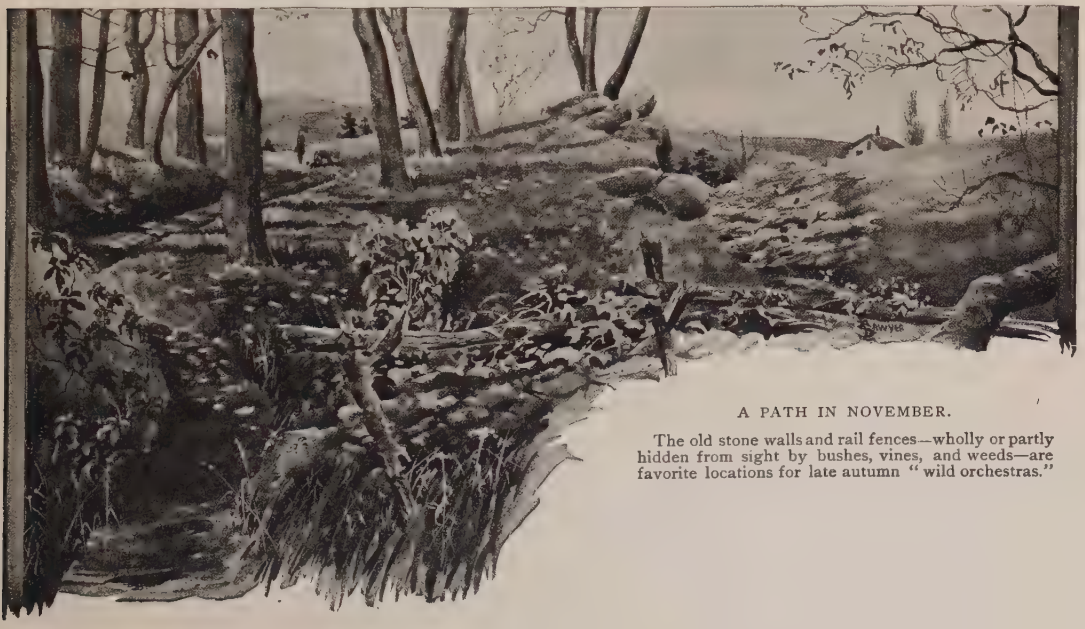
THERE are easier paths than the one we shall take; but we soon choose between the smooth country road and the rough field-route. The wagon-road does not allure us with its twists and turns, for it often wanders to avoid wild Nature; we shall ramble to find her where she has decked the walls and hung her rich festoons, or where she smiles through the vistas of the woods.

Here is a dear old stone wall half hidden among wild-plum shoots, bushes, and tall weeds. The white-throated sparrow is here with a dozen of his fellows, and is thanking the sun for shining so warm into their cozy nook. Oh, what a sight! Or should we not rather say "What music"? It is a kind of music for the eye as well as the ear, for on a close approach we find the brambly growth teeming with whitethroats, song-sparrows, and myrtle-warblers, that flit about or rustle merrily among the dry leaves. Here a whitethroat mounts a thorny plum-branch



THE CALL OF CRICKETS FROM COZY PLACES UNDER STONES SEEMS AS CHEERY AS DO ANY OF THE SOUNDS OF SPRING.

and calls cheerily to his comrades; another suns himself near by, and then we surprise a song-sparrow at his bath in a spring twinkling among



A PATH IN NOVEMBER.

The old stone walls and rail fences—wholly or partly hidden from sight by bushes, vines, and weeds—are favorite locations for late autumn "wild orchestras."

the tall grass. Here are juncos, too—a happy bevy of them about the briers and black haw-bushes.

Some would say "Here is a bare pasture to be crossed now," but rather let us respond to the

THE HYLA'S CHEERY PIPING IS SO MUSICAL THAT WE OFTEN SUPPOSE IT TO BE THAT OF A BIRD. LISTEN FOR IT IN THE LATE AUTUMN WOODS.

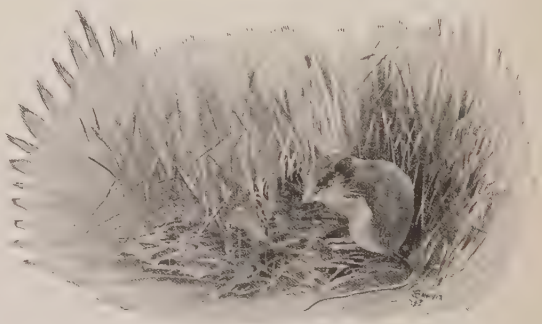
crickets who are chirping, and explore it. A flicker has come before us: there he is, hopping in his awkward fashion and hunting ants. Even the late and pretty burr-thistle is not "wasting its sweetness on the desert air," for see the bumble-bee—still busy, of course. And now we have our crickets, under this flat stone. They are by no means so spry as they were a month or two ago, when, if we had tried to catch some of them for fish-bait, we should have found it hard work. Now they are numb with cold, and still they chirp! Goldfinch has been at work on the thistles, for here is a stalk with ragged and well-plucked burrs and a black and white tail-feather in a spider's web. The goldfinch has on his brown suit now and is off to the birch-trees with his most happy family.

We have followed a cow-path out of the pasture into an alder-swamp; and here is the merriest bird group we have heard yet. We might have expected these tree-sparrows, for this is their time and place exactly. They are not a bit afraid, except of being stepped on, and do not leave us out of sight, but only fly on a little ahead, as we go, till we are out of the thicket.

Goldenrods and a buttercup! And there is a wall covered with clematis, and a picturesque old apple-tree overhung with a bitter-sweet vine, and a rock decorated with the Virginia creeper turned to all shades of red and purple. See how fondly that wild grape-vine has embraced the old stump till it is nearly hidden. And see the beech-trees nearly covered with yellow leaves.

That musical piping we hear is not a bird's voice, though as sweet as one and coming from the birds' airy haunts. Pickering's hyla grew silent in the pond; but now from some tree he looks abroad on the landscape and finds an impulse to sing again. The "peeping" is spring-like, but sleepy and still welcome.

Why, we are scarcely out of the wood, and here is a pretty little field-mouse, but he vanishes in the tall grass in a moment. It is quiet in these fields again; but I think Nature has fulfilled her promise—don't you? How happy those bluebirds are even as they fly away southward! They like spring and "purer" skies best. *"Pure-er, pure-er!"* Hear them! They have gone now, over the harvest-field, toward the purple hills. But don't you think Nature has heard their call, and will give us the fair skies when the bluebird comes back again?



ALL SPECIES OF WOOD-MICE ARE NEVER MORE CHEERY THAN IN LATE AUTUMN. THEY REVEL IN SEEDS, GRAIN, AND NUTS.

EVERYBODY, from little Jack to the old folks, who were visiting from the city, clapped their hands and looked happier when a nutting-trip was mentioned. It was such a beautiful October morning, clear, but not a bit cold, and a red squirrel was chattering so merrily in the edge of the woods near by.

Some empty salt-bags were soon provided with cords to go over the shoulders, and everything seemed ready. Where to go? That was the question. Frank knew just where the nuts were, but Frank had a sprained knee and had been unable to walk for the past week. However, the knee had improved so rapidly since the nutting-party was spoken of that nothing would do but to lead out "Charles," the old horse, and lift

THE RED SQUIRREL AND BUTTERNUTS.

Frank carefully to his back. All was ready now and off we gaily started, the three grown-ups and we five young folks, some of those on foot ahead, some behind, and the horse in between.

The first halting-place was a butternut-grove on a rocky slope at the edge of a woods. The first animal announced at the grove was a red squirrel; or, rather, he was the first to announce himself, for he protested loudly at our coming to gather nuts, and frisked his tail very saucily from his seat on a low branch. We found the ground under the trees plentifully strewn with fine large nuts in their bronzy, sticky coats. What fun it was to gather and pile them up! In a couple of hours we had made a heap of nuts the size and shape of a muskrat's house. It was noon now, and we went down to the brook at the bottom of the hill to "wash up" for lunch. All but Frank, I should say, for Frank and the horse were now missed for the first time. Lunch was no sooner spread out on the grass, however, than Frank and old Charles came noisily up out of the woods. Frank was all excitement, and the wonderful tales he told of what he had seen and heard, together with the strawberry jam and crab-apple tarts, made the time fly. Frank had ridden within a yard of a chipmunk without in the least disturbing him, and a red squirrel ventured so near that as he passed on a branch over the horse's head the leaves bent down and brushed his ears, causing him to wag them. Song-sparrows and robins paid no more attention to him than they would have given to the horse if he had been alone.

Probably all thought him a new kind of horse.

Lunch was soon over. Then the next thing was to topple over the pile of nuts, spread them out and cover them with leaves, to be gathered

up next day into the box of a wagon. While thus hiding the nuts, Cousin Arthur called us all to watch a red squirrel who was doing almost the same thing with nuts which he brought, one at a time, from the trees to a low brush-pile. He would bring a nut, dig out a little hollow in the ground under the brush, put the nut in, and pat leaves over it, then scurry off for another. He was making his winter store. In one little hollow I found nearly a peck of nuts which a squirrel had heaped together and covered with leaves. We found many empty shells, and noticed that each had been gnawed into in almost exactly the same way, always in two places on opposite sides just where the two "meats" would be most exposed.

THE CHIPMUNK AND HAZELNUTS.

Frank led the way again, and we entered the woods, following a cow-path to reach a hazel-thicket on the other side. We found no nuts until the very edge of the woods was reached. Here a chipmunk was chirping loudly, and May and Henry, who went to investigate, found two beech-trees loaded with nuts. Instead of squirrels, they were chipmunks who seemed to regard these nuts as their own property. No fewer than three of the little fellows were sitting in sight on the stones under the trees. Every flat stone was covered with the shells of beechnuts. We now called to mind that some wood-choppers once found in the woods near our house about two quarts of these nuts all shelled and skinned and stored up in a hollow tree. We all sat for a long time watching the pretty creatures store the nuts away in their holes in the ground. They would always have their cheeks full of nuts when they entered a hole, and always came out with cheeks empty.

THE CHIPMUNK GOING HOME WITH A NUT IN EACH "CHEEK POUCH."

We had great fun climbing about in the big trees and filling up our bags. It was a race to see whose bag would be full first. We boys were near the top of one of the trees when May suddenly announced, to our surprise and shame, that her bag was full of nuts. We had laughed at her efforts to climb up higher in the tree and then disdainfully left her on one of the lower branches. She had been picking steadily and saying nothing for some time, and this was her triumph. We looked woefully at our half-empty bags, and began to wish we had done less rocking and climbing, and had picked more nuts.

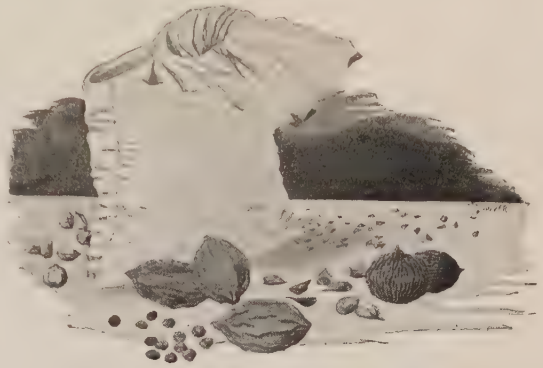
Soon we were left alone in the tree. But at last our bags were full and we followed May, who had gone with Frank and the older cousins

THE STORAGE-CHAMBER AND ENTRANCE OF A CHIPMUNK.

after hazelnuts. The hazelnuts were not so plentiful as the others; chipmunks had been here before us. It was under the hazel-bushes, beside a stone wall, that Frank found a chipmunk's hole and called us to see the chipmunk carry leaves into it for his nest. He took many cheekfuls of dry leaves into the hole during the few minutes that we watched him. Sparrows of several kinds, with waxwings and blue jays, were numerous

A BLUE JAY ABOUT TO CRACK AN ACORN.

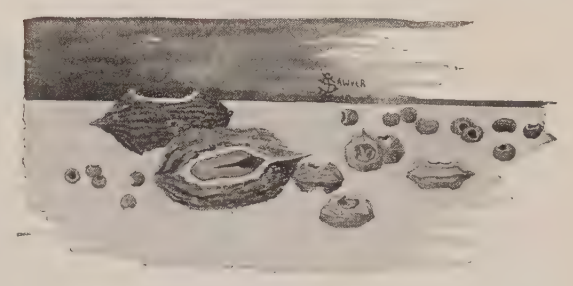
along the old fence where the hazel-bushes grew, the jays romping, hunting for nuts, and making a great racket as though this were their Fourth of July. Blue jays are as fond of nuts and nutting-parties as boys and girls are. I saw one jay do a thing which puzzled me for a while. He was feeding in an oak-tree, which was loaded with sweet acorns, when he chanced to let an acorn fall to the ground. Instead of picking off another acorn, he followed this one eagerly. Does one acorn taste so much better than another to



A BAG OF NUTS AND SAMPLES OF CONTENTS.
Beginning at left—hickory-nuts, hazelnuts, butternuts, chestnuts, black walnuts, beechnuts.

a blue jay, or was there a fat grub of just the right kind in the acorn which the jay followed?

Henry saw a little field-mouse sitting up squirrel-fashion, as he called it, eating a basswood-nut. The tiny creature ran into its hole before



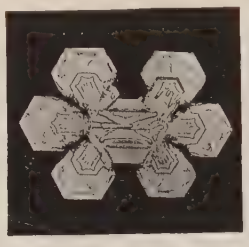
BASSWOOD-NUTS. Eaten by white-footed mouse.
BUTTERNUTS. Eaten by red squirrel.
HICKORY-NUTS. Eaten by red squirrel.
HAZELNUTS. Eaten by chipmunk.

we could get close enough to throw him some crumbs.

EDMUND J. SAWYER.

SNOW-CRYSTALS

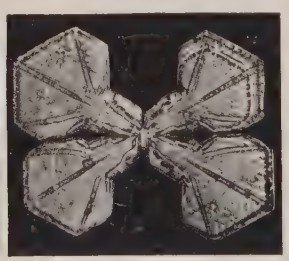
Some years ago a boy in northern Vermont, hardly midway in his teens, was attracted by the



wonderful beauty of snow-crystals and frost-work as revealed by a small pocket-lens. He began to study and to make drawings of them, and the longer the study was continued, the more fascinating it became.

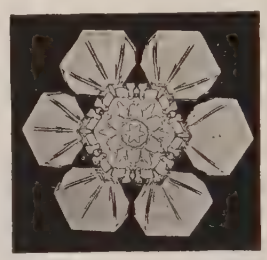
Crystal forms of wondrous beauty, snowy creations strange, rare, unique, rewarded the zealous search. Drawings of a few of the simpler ones were made; but how imperfectly, how little indeed, did these portray the beauty and the perfection of the originals! The desire to photograph them became almost a passion; and at last an outfit was procured.

After many trials and failures, the boy obtained his first success in the early part of the winter of 1885. Studying and photographing them proved to be so delightful a task, that during every winter since then to the present it has been continued, until now the photographs number more than eleven hundred, with no two alike. The marvelous thing about them is their diversity of form. Indeed, the variety of shapes is so nearly infinite that it is extremely unlikely that



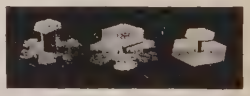
any person will ever find and photograph more than an insignificant fraction of the whole.

The more common types resemble tiny hexagonal columns, hexagonal plates, or frail, fern-like stars. What boy or girl has not seen and admired the ethereal beauty of these stellate outlines, or failed to notice them as the crystals fall to earth in feathery flakes? Yet the exquisite designs in the middle of the more solid plates, which often resemble mosaic and other artistic patterns, endow them with a peculiar charm; and when, as often happens, Nature, in her inimitable manner, combines these two types into one, and mounts her mosaic gems within filaments of silver as centerpieces for the fern-like stars, the



result is beautiful beyond comparison. The "mat" forms are ornamented by dots, lines, and curves.

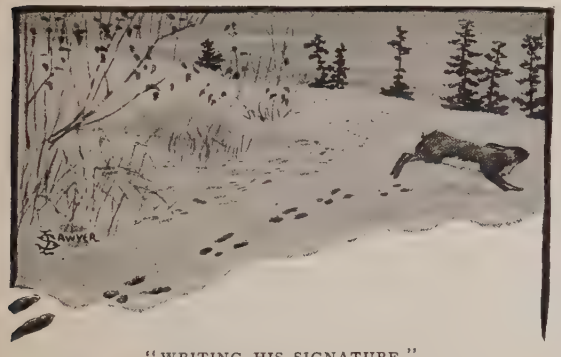
But, in addition to these more frequent types, she fashions others much more rare and delicate. In spring and autumn, heavy granular pellets, resembling pills fresh from some apothecary's shop, come falling through the air. Again, as if in a spirit of fun, she evolves irregular, oblong crystals, indescribable in their strange variety. Sometimes, as though trying to imitate man's designs, she seems to borrow her patterns from something similar fashioned by him, or she molds the crystals into the form of animals, or of cuff-buttons, or of starfish. Altogether, the study of snow is a delightful one, and must, it seems, always possess the charm of novelty; for so long as eyes shall see and kindle at the crystalline beauty, so long shall howling blizzards or the silent falling of the snowflakes scatter over the earth choice designs from the heavens, never to become exhausted, never to become wearisome, and always ready to charm those who have become "crystal-gazers."



Let the crystals fall on black paper or cardboard. Sketch them if you please, but at least *see* them.

THE AUTOGRAPHS (TRACKS IN SNOW) OF MINK AND REDPOLLS NEAR THE BROOK.
Note carefully these "signs of wild life" on the ice-covered brook, in the foreground, near the tree, and on the right and left banks.

Birds and four-footed animals are few now and rather seldom seen, for it is not always easy to wade through the deep snow in the woods and fields for chance glimpses of crossbills, owls, redpolls, and snow-buntings, while fur bearers generally make quick forays after food and water and soon return to their snug burrows or hollow trees. We are lucky if we see on our winter walk "hide or hair" of anything but a few squirrels and rabbits. But on the snow are many



"WRITING HIS SIGNATURE."
The cottontail rabbit making tracks in snow.

stories written in most varied and interesting characters. Not even a tiny field-mouse can take one timid step from his hole without leaving this record for sharp eyes to read. The snow, which shuts the animals themselves away from us, is, after all, an advantage. Animals of which we learn little in summer, because they are scarce or roam abroad largely at night, now by their trails in the snow tell us about their wanderings, how and where they got food, and where they went for water; and whether they ran, trotted, walked, or ambled, is there written down.

In looking for and following these written trails, I have learned that certain kinds of places are particularly favored. Thus a swift stream or any piece of open water is always sure to attract many of the winter wide-awakes, and is the best place I know in which to look for various snow trails, especially of mink and muskrat. Near bushy or weedy growths along old fences, beside low thickets or in dry sedgy marshes you will find that mice have been most numerous and active, their trails crossing and recrossing in some places quite like the railroad tracks at a busy junction, or a large freight terminal. Here, too, is naturally a good place to look for signs of foxes and of big snowy owls. Where one of these creatures has sat in wait for the mice or pounced upon one of the poor fellows there will be curious marks to study. The fox, however,

is a great traveler, and once you are in the open or wooded country you should be constantly on the lookout for his trail, though unless foxes are more than usually numerous in your locality, one or two fresh trails are all for which you may reasonably hope.

A weedy field with just the right look is perhaps the second-best place for wild trails, mostly bird-tracks. Goldenrod, sticktights of various sorts, mullein, and other heady weeds in the shelter of a wood, with perhaps clumps of black haw and wild plum—this is the place for winged winter gleaners. A search here can hardly fail to show where "snowflakes," tree-sparrows, horned larks, redpolls, and perhaps goldfinches have been at work; about specially seedy stalks of the right kinds the little trails are clustered and confused, reminding us of the mice-tracks which we saw in the swamp, but much more thickly grouped than mouse-tracks are ever found to be. I have watched the lively birds making just such trails on a frosty day, and how they did flutter and flit about one weed-stalk, one of the flock trying to keep all the rest away and at the same time feed from the weed by tiptoeing or flying up to reach the higher seeds! In these tangled trails among the weeds and stubble, can you pick out the snowflake's tracks and those of the tree-sparrow? If not, you have so much at least to learn in the weedy field.

THE TRACKS OF THE RACCOON.

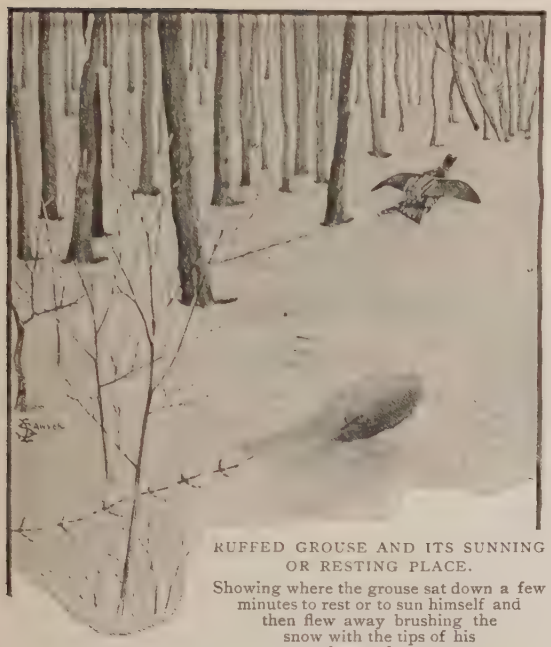
Trail to home tree. In the upper part of the tree is the entrance to the hollow interior. In the circle is a near view of this entrance.

RED FOX AND TRAIL.

It is remarkable how many tracks of foxes you will see quite near the village, where they have been in the night.—HENRY DAVID THOREAU.

Woods and thickets of any sort may show tracks of the ruffed grouse. But at this season I go for these to an alder swamp or low-lying alder thicket. Here the shy grouse love to go to feed on the buds and catkins of alders and other trees usually found in such places. I have found the trails very numerous for weeks together about fresh brush-piles where woodmen have been at work. To me the trail of this bird is always the most interesting of all. Here and there are places where the grouse has rested a while in the snow and left the imprint of breast and tail. This is the time to find the snow caves where these birds spend the cold nights when the snow is deep.

Coming to the big woods we find the tracks of red squirrels and rabbits most abundant. Now look for the more rare trails of gray squirrels, skunks, and raccoons. A wood-cutter once told me of felling a hollow tree in which he found to



RUFFED GROUSE AND ITS SUNNING OR RESTING PLACE.

Showing where the grouse sat down a few minutes to rest or to sun himself and then flew away brushing the snow with the tips of his wings as he rose.

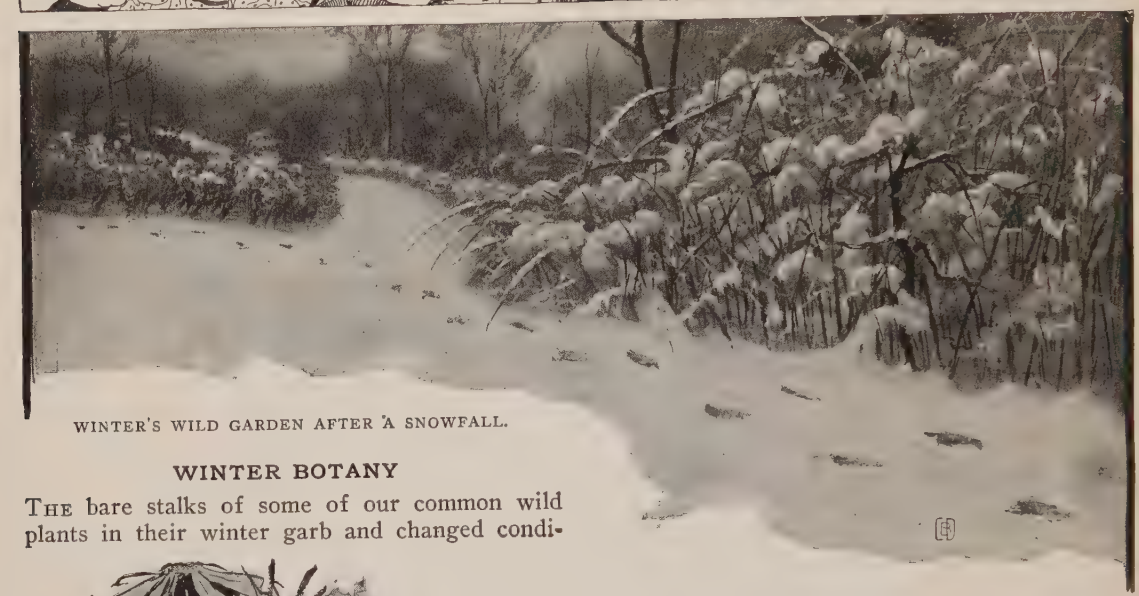
his great surprise half a dozen or more coons. This lazy animal seldom, if ever, stirs abroad in bright daylight, but at night unrolls himself and crawls clumsily down from the old tree in which is spent a great part of his life. His tracks are indeed interesting and if possible should be followed. Can you tell a coon's trail from a skunk's? Here is something to learn in the winter woods. The skunk is a born ambler. His trail will be found going this way and that as he looked for food; now and then he has stopped to root down to the ground. The other day I met a little skunk going about rooting with much energy in the muck of the wood. Undisturbed, he allowed me to follow him about until I came closer than a few yards, when he would face around and try to scare me by making little runs in my direction, then scraping backward with his front feet, a very peculiar way that skunks have.

Though the birds seem merry and lively, and the red squirrel frisks across the snow, the wild creatures really have little love for frost and bleakness. The squirrels are out for food and, when not "hunched up" gnawing a butternut or a frozen apple or looking for something to gnaw, they will be found curled up on a branch close against the side of a tree, the tail close over the back, their feet tucked well in under them. Bob-whites, redpolls, and goldfinches on sunny days leave their tracks in weedy fields. A storm drives them to the shelter of the woods or to some protected place. The bob-whites, or quail, snuggle close together under tall grasses or in some thick vegetation to spend the nights and to weather out rough winds. When there is snow in such places you will find it fairly trampled down by the numerous little feet. The bob-white's track is exactly like that of a ruffed grouse, only smaller.

A RED SQUIRREL IN COLD-WEATHER POSE.

"BOB-WHITE" (QUAIL) IN SHELTER OF A BANK.

Quail often seek the sunny side of a steep bank.



WINTER'S WILD GARDEN AFTER A SNOWFALL.

WINTER BOTANY

THE bare stalks of some of our common wild plants in their winter garb and changed conditions are curiously unfamiliar. Some tall and gaunt stems hold aloft a few queerly shaped, dried, and empty pods, while some, like the evening primrose, have their long stems covered with pods.

BEGGAR'S TICKS AND BITTERSWEET.

Far more tantalizing is an unknown dried pod than an unknown flower, for our botanical key will speedily unlock the secret of the flower's name, but before the sphinxlike pod one is helpless—for the time at any rate. Even the flowers one knows well produce pods or other forms of seed holders of such unexpected shape as to appear more a roguish disguise than a regular fruiting. Who would think, for example, that such a profusion of tiny waxen blossoms as those that so charmingly top the common milkweed would leave to represent them merely a single, great, rough pod—sometimes two, rarely three—instead of a whole cluster of tiny pods or even berries?

Of course, you all know the common climbing bittersweet, that pretty vine which reserves its bravest show for the winter season. Those bright, three-parted orange capsules with each part bent strongly back and perhaps, with the birds' permission, still retaining the soft scarlet berry. These "winter blossoms" disclose the identity of the plant even more readily than do the true blossoms—insignificant little greenish white ones that had their brief day last June.

Less decorative by far, but more than balanc-

ing this failing by their alertness, are the seeds of the desmodiums. You cannot help but find them, for they simply refuse to be overlooked. You all know them well, for many are the times they have forced themselves on your unwilling attention as you tediously picked or vainly attempted to brush them from your clothes. If you were familiar with their wiles, of course you simplified the matter by scraping them off with a case knife. Then, if you were careless, they were swept up and thrown out—which was just exactly their intention when they plastered your person with their unwelcome decorations. Their family resemblance is so strong that in your vexation you easily took them to be all of the same kind. But look a little more closely next time and you will probably find there are several different kinds among them. From these different shapes you may, with care, identify the various species. See these fellows here, like two links of a chain, narrow at one end and broad at the other, which joins the narrow end of the one following. You will at once recognize them as from the desmodium known as the *pauciflorum*, from the fewness of its flowers. And this single fellow here, shaped so like an admiral's chapeau; though he resemble the double ones closely enough to be a brother, the most he can claim is to be only a cousin, for he is from a plant of a different species (*D. nudiflorum*). Then again, this chain of three links with the square ends where they join is still a different kind, the long-leaved desmodium (*D. longifolium*). And so the list might be extended to a score or more. Among the mass of desmodium seed you will most likely also find a few that are quite different with their long, barbed prongs. These are not related to the desmodiums who claim close kinship with our

A VARIETY OF STICK-TIGHTS.
"They simply refuse to be overlooked."

DRIED STEMS AND SEEDS OF GREAT RAGWEED.
Notice the curious angles of the seeds.

"limas" of the kitchen garden. This little fellow with the two prongs and the barbs all around (*Bidens frondosa*) bases his claim to respectability on his relationship with such aristocratic flowers as Japan's national flower, the

PODS AND SEEDS OF THE ARROW ARUM.
(*Peltandra virginica.*)

queenly chrysanthemum, Scotland's thistle, and our own goldenrod. In spite of his international relationships, his evil deeds at once stamp him the rogue that he is, for in ungrateful return for his free transportation he reaches through your garment with his long, pointed prongs and nips you like ant-bites. Our drawing shows a head of these fellows with his sharp prongs extended ready to demand free transportation of the first comer. Another of these fellows, a long slender one, is not content with two prongs but must needs have four so as to be sure not to lose his hold. He takes his name from the shape of his leaves, *Bidens bipinnata.* Should you find other kinds of these two families you will find full illustrations of them in "Illustrated Flora" by Britton and Brown, which you can find in any good library, and from which you can easily identify your specimens.

And then there is the great ragweed stalks with the shriveled clumps of foliage along its branches from which you can shake out the queer shaped seed. Who that has once seen this odd-looking seed with the many spines at its tip can ever forget it? Aside from its peculiar shaped seed this commonplace looking old stalk holds quite a pretty secret if you care to look for it. It is the pith and is about as immaterial a substance as you will ever see, being composed almost entirely of air contained in cells with the thinnest imaginable walls transparent as glass. A broken section of this pith is iridescent even to the ordinary sight, but a thin shaving of it under the microscope is indeed a thing of beauty. A veritable cathedral window it becomes; for the angles of intersection and edges of the cell walls form fairly regular geometrical figures, each of which frames a beautiful, dazzling bit of prismatic color.

Frozen in the mud down in the swamp you will have no difficulty in identifying the arrow arum from its clump of green seed packed tightly together within an inclosing sheath. As the seed increased in weight they gradually bent over their stem which let them slowly down into the mud into which they sank more or less according to how soft it was. From the drawing you will have no difficulty in recognizing these seed. They are easily identified even if floating alone, for if you will remove the crumpled husk you will find the seed inside surrounded by a coating of soft slippery jelly, perfectly clear and which you will find extremely difficult to remove.

These are only a very few of the many plants that you may easily recognize from their seed or pods.

You will add greatly to your pleasure in summer if you do not pick so many of the wild flowers but watch them develop, notice what the fruit looks like after the flower is gone, and then watch to see how each one distributes its seed, for all of these seed receptacles have their own method of fulfilling this all-important mission. Some, like the evening primrose, have their pods open at the ends and so let the wind shake out their seed; others, like the witchhazel, shoot their seed quite a distance from the hard cases, which is done as you would shoot a slippery orange seed by pressing between your finger and thumb. And then there is the cranesbill which throws its seed from a little cup at the end of a spring which you may see even now coiled up with the little cup at its tip.

A walk in the winter woods spent in identifying your friends of the summer by their dried pods or their seed will prove a most enjoyable and profitable pastime.

CLEM B. DAVIS.

TURNING WHITE

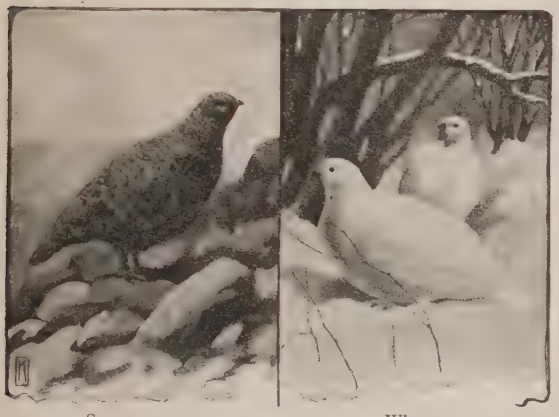
"The hill-range stood
Transfigured in the silver flood,
Its blown snows flashing cold and keen,
Dead white, save where some sharp ravine
Took shadow, or the sombre green
Of hemlocks turned to pitchy black
Against the whiteness at their back."
— WHITTIER IN "*Snow-Bound.*"

WITH the first snowfall all nature is whitened. Even the air is "whited," as Emerson has said.

"The whited air
Hides hills and woods, the river, and the heaven,
And veils the farm-house at the garden's end."

Many plants, too, are now acting their part in the transformation, for the change is not limited to the world of frost crystals.

Long ago, the goldenrod turned brown, but now its whiteness stands out clear and bright against the weather-beaten fence or the grayish blackness of the stone wall. The hawkweeds, too, have passed from yellow to brown and thence to a wintery whiteness. The fluffy thistle-heads, once so rich a purple, and the milkweed pods, once heavy with their burden of brown seeds overlapping one another like the scales of some great fish, are now tossing aloft their whiteness by the handful.



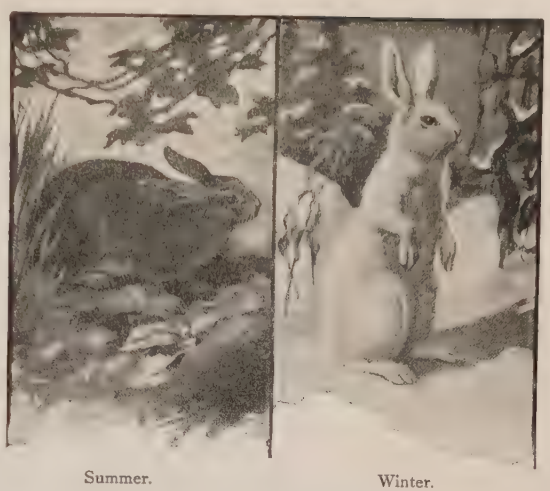
Summer. Winter.

THE PTARMIGAN TURNS WHITE.

An apple tree by the roadside has been embraced by a part of the winter's white flora, for the beautifully plume-like fruit of the clematis is adorning it, while the woody stems have climbed far up among the supporting and protecting branches.

Some fence corners and trees assume a floral whiteness, while others are beautified by crystals, for

"Every pine and fir and hemlock"
Wears "ermine too dear for an earl,"



Summer. Winter.

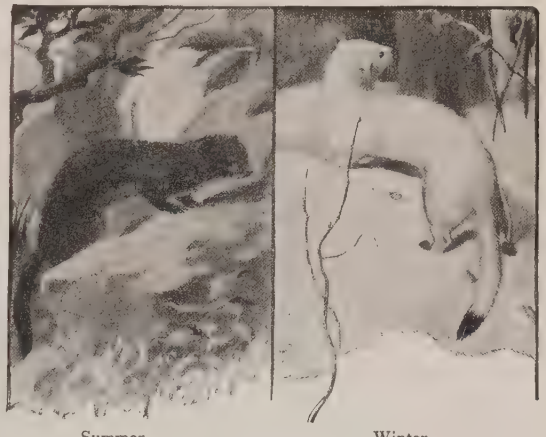
THE VARYING HARE.

Its name is due to the fact that its color varies according to the season, being *pale cinnamon brown in summer*, and *white in winter*, with only a narrow back line of brown.—W. T. HORNADAY.

and the buildings, like those about which Lowell tells us, are "new-roofed with Carrara" (a very white marble).

The brooks soon become fringed with white sculpturing; window-panes, fence rails, even the stones of the city's sidewalks are decorated with dainty lace-work in patterns that only Nature's fancy can evolve.

But more wonderful than all these apparently accidental examples of winter's whiteness are Nature's intentional changes in her efforts to adapt to their surroundings those creatures whose welfare will be enhanced by a resemblance to the generally prevailing character of the season.



Summer. Winter.

THE WEASEL.

The weasels of the Northern States and Canada turn white at the approach of winter. The end of the tail, however, does not change color, but remains perfectly black as in the summer.
—*American Animals.*

Probably the most marked examples of this are afforded by the ptarmigan and the ermine weasel.

The ptarmigan, a member of the grouse family, is in summer mottled with black and a rich fluffy brown, but in winter it becomes pure white.

The snowy owl, and the snow-buntings that come to us from the far north, have whitish plumage that blends harmoniously with the prevailing whiteness of the landscape.

But perhaps the most interesting example of all is the weasel, whose fur in the summer has a peculiarly soft shade of reddish-brown, but in the winter is pure white, except at the tip of the tail. It is probable that this black point is useful to its owner in diverting the attention of a carnivorous bird or of a beast of prey, as the black spot is more readily seen than the white body of the animal. It is said, too, that if the tip is covered

WHITE SNOW-BUNTINGS COME TO US FROM THE FAR NORTH IN WINTER.
This makes it seem as if some of our birds had turned white.

with snow the whole weasel becomes clearly visible, and that if the first snowfall is later than usual it is claimed by some naturalists that the color change is delayed accordingly. The turning white takes place when most needed.

The arctic fox is snow-white for all the year in the far north. Farther south, it is bluish-brown in summer, and becomes white in the winter.

In the case of the plants referred to, the tissues themselves are bleached. Animals become white through a change of covering. The actual hair, fur, or feather, does not vary, but is replaced by a new growth. This is well explained, in a description of the varying hare, in "American Animals" (Doubleday, Page & Company):

> Much has been written on the change of color of the varying hare and other mammals and birds, but there are few subjects concerning which more mistakes have been made. We read of the change taking place in a single night, coincident with the first fall of snow and of the actual blanching of the individual hairs; one statement being quite as erroneous as the other. The change is really very simple. All mammals, in northern climes at least, shed their coat twice a year, acquiring a thicker fur in winter and a thinner one in summer, and in the present species the winter coat is white while the summer one is brown and the individual hairs never alter their color from the time they appear until they fall out. The change from brown to white occurs in the autumn and for a short time the animal is somewhat "mottled." Then in March, as the weather gets warmer the snow gradually disappears from the woods, the fur of the northern hare, probably by reason of the wearing away of the tips and the shedding of the long hairs, gets more and more mottled with brown, the change in most cases that have come under my notice commencing at the back of the neck, on the feet and the under surface of the body, and in an astonishingly short time the dark summer coat is fairly resumed. Although belated snowstorms must often give them occasion to regret the loss of their winter coats, taking one year and another, the change seems to be wonderfully well timed, and at most they are really no worse off than those other inhabitants of the woods that wear their dark coats throughout the winter.

THE GREEN OF MIDWINTER

No other natural growths are any more closely bound up with our pleasures and affections than are the evergreens. Holly wreaths have been hung about our homes, the Christmas tree has been lifted to its place of honor there and decorated with our presents; but, do we, indeed, know these greens of winter? No plant or tree reveals its true character except in its natural surroundings, where it is played upon by the forces which foster its growth. So we must know these winter greens in the out-of-door world, where wind and rain, hail and snow, are the powers which have helped to develop them into the forms we see. With their finely divided needles these trees offer no such body to the wind's passage as the broad-leaved trees of summer, so they can withstand, unharmed, the winter's blasts, and preserve, even on bleak mountain-sides, the beautiful symmetry of their forms. We have only to linger beneath the pine trees to realize that the wind is no disturber or destroyer to them. Whether the breeze is from the warm southwest and breathes softly with a sighing murmur over the plumy boughs, or sweeps down with stronger, more insistent force upon these sensitive harp strings, the trees respond alike with harmonious motion and sound.

All the evergreens love the wind. Two giant spruce trees guarded the north side of my boyhood home, and I remember, as one of the most impressive sounds of nature, the deep soughing tone—that solemn sonorous murmur which these trees gave forth as the cold winter winds began to blow. No other tree, however, has so wide a range of expression as the hemlock. The fern-like fronds of the terminal sprays which are so

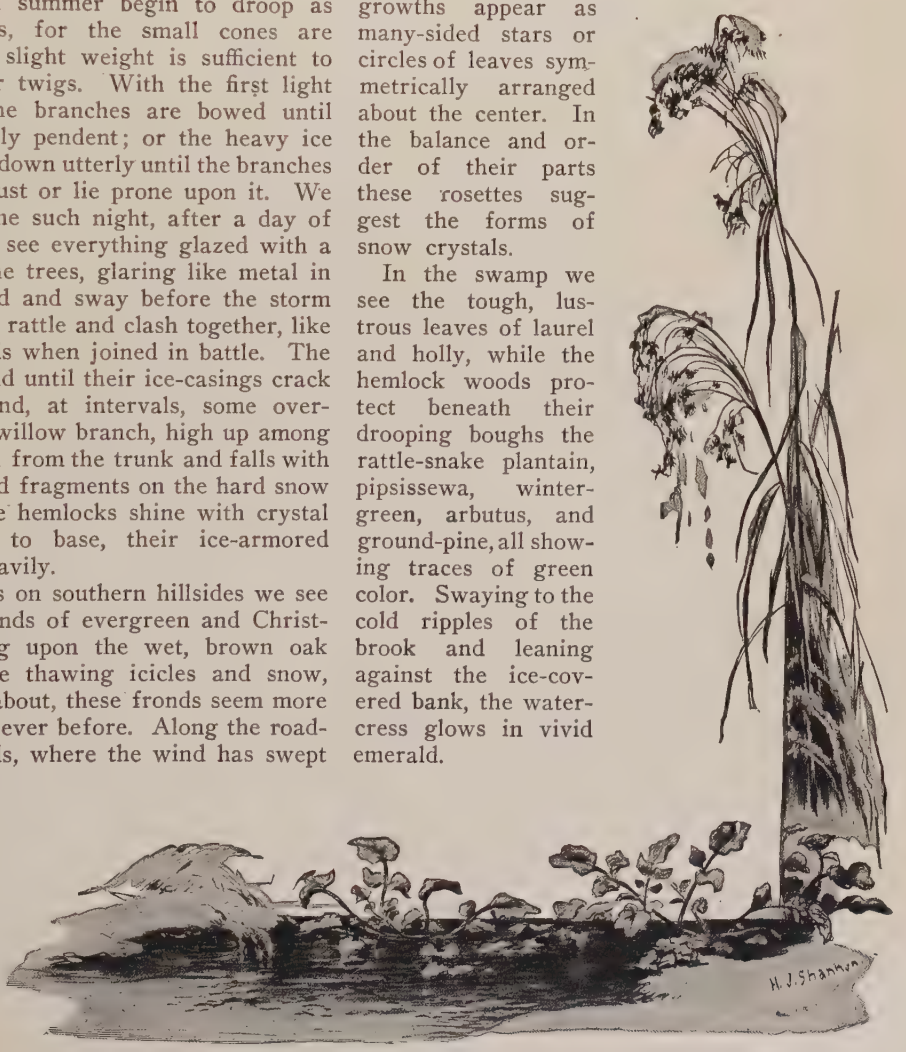
Evening primrose. Thistle. English plantain.

GREEN ROSETTES OF WINTER.

lightly upraised in summer begin to droop as autumn approaches, for the small cones are formed, and their slight weight is sufficient to depress the slender twigs. With the first light snow of winter the branches are bowed until they hang gracefully pendent; or the heavy ice storms weigh them down utterly until the branches sweep the snow crust or lie prone upon it. We may go out on some such night, after a day of sleet and rain, and see everything glazed with a coating of ice. The trees, glaring like metal in the lamp-light, bend and sway before the storm until their branches rattle and clash together, like bayonets and swords when joined in battle. The trees strain and bend until their ice-casings crack and split apart; and, at intervals, some over-weighted maple or willow branch, high up among the tree-tops, is torn from the trunk and falls with a crash of splintered fragments on the hard snow crust near by. The hemlocks shine with crystal sheen from crest to base, their ice-armored boughs drooping heavily.

About the springs on southern hillsides we see the vivid green fronds of evergreen and Christmas ferns drooping upon the wet, brown oak leaves. Among the thawing icicles and snow, which frame them about, these fronds seem more highly colored than ever before. Along the roadsides or in the fields, where the wind has swept them bare, the "winter rosettes" will be found. The parent plants of the evening primrose, thistle, moth-mullein, and many more, show only dried and broken stalks above the snow; but, beside them, these first-year growths appear as many-sided stars or circles of leaves symmetrically arranged about the center. In the balance and order of their parts these rosettes suggest the forms of snow crystals.

In the swamp we see the tough, lustrous leaves of laurel and holly, while the hemlock woods protect beneath their drooping boughs the rattle-snake plantain, pipsissewa, wintergreen, arbutus, and ground-pine, all showing traces of green color. Swaying to the cold ripples of the brook and leaning against the ice-covered bank, the water-cress glows in vivid emerald.



"SWAYING TO THE COLD RIPPLES OF THE BROOK . . . THE WATER-CRESS GLOWS IN VIVID EMERALD."

NOT AN APPLE LEFT!

DRAWN BY KATHARINE PYLE.

THE YOUNG NETTERS

BY GEORGE WHITEFIELD D'VYS

"Mr. Hardy! Mr. Hardy!"

A boy sprang into the narrow street, and vigorously waved his cap at an approaching motorist.

The car came to a stop beside him, and the driver called cheerily: "How are you, Billie-boy! Anything special?"

"Yes, sir," came the quick answer. "Meeting you has saved me the ten-mile tramp to your house and back, for father wanted me to go over and tell you about the three hundred dollars he owes you."

"What about it?" the words were crisp and sharp, while the features of the speaker became stern and cold.

"He says," the boy continued manfully, "that on the first of last month, when he could n't pay you anything, he promised *double* payment this month, but—"

"But he cannot, eh?" interrupted the motorist, somewhat icily. "Well, then, how much *has* he for me?"

"Nothing, sir," was the quiet answer. "And the fact is, Mr. Hardy, he is almost completely discouraged. He counted on the early mackerel, you know, sir. He fitted out the sloop and started south with the seiners and other netters, but from Hatteras to Cape May not a school of fish was sighted by any of them. Three quarters of them never even wet a line, sir, so finally they all returned home in disgust. They claim it the most disastrous trip for—"

"Yes, yes, I 've heard all that, Billie," broke in Mr. Hardy hurriedly. "Where is your father now?"

"He had n't the money to refit the sloop," the boy answered readily, "so he is going as seine-bearer for Ted Bigelow on the *Marion C.* The whole fleet is refitting with a rush, and will start away this very afternoon—headed this time for the Nova Scotia coast."

"On the strength of some newspaper report, probably!"

"No, sir, not that. Two haddockers came in and each reported seeing two of the Gloucester fleet racing from off that way, to be first to the New York market with their catches. One had twenty barrels, the—"

"Yes, yes, I understand," Mr. Hardy again interrupted. "All tomfoolery, all tomfoolery, every bit of it! That 's my idea! I 'm a lawyer, and not a fisherman, Billie, but I venture to say that what the fleet will go chasing after two hundred miles away are right here at our own back door. That 's my idea! They 've been scared offshore down there in those southern waters, I take it, and no doubt the set toward the New England coast began a week or more ago, so that for somebody hereabouts large catches will be the order of things. That 's my idea.

"Now, then—about that money. I 've always liked you, Billie-boy, and in order that your father might keep you at school I loaned the money to him to buy the sloop after he 'd lost his schooner on the Grand Banks, but frankly I 'm tired of his dilly-dallying methods. The trouble is, he 's lost his grip; the tide of adversity is sweeping him off his feet and he has n't taken an overgrasp so that he can hang on and eventually win out. What I say is this: no matter how dark things look, don't lose your grip. Hang on to the situation and something will surely happen; that 's my idea!

"Now about the *Nettie Ann;* there 's another party after the sloop, Billie, and I am carrying to your father a notice to the effect that he must live up to the conditions of the sale and pay me the money long overdue at or before noon to-

morrow or lose the craft. You understand? At high noon to-morrow, I get my money or take the sloop! I intend to deliver my notice in person. Would you like to ride along with me?"

"No, I 'm not going home just yet," the boy answered slowly, as he stepped back upon the plank walk again, and as one bewildered gazed after the blue car now rapidly disappearing.

"Hello, Billie!" sounded a voice just behind him. "I 'm dead sorry—honest!"

Willie Mitchell wheeled sharply. At his right stood a bright, sturdy lad, his dark clear eyes flashing angrily while his deep tanned face bespoke the sympathy he had voiced.

"Hullo, Bob—you here?" Billie said confusedly.

"Yes, I came along just in time to hear those last words. I was headed for your house. I 'm all alone; mother 's gone down to Wellfleet for a day or so, and dad is scudding around Long Point, the first of the fleet to get away, too." Bob said this rather proudly, adding: "Have you heard the news, Billie?"

"What news?"

"A lot of Harvard chaps came in on the morning train. I believe they call themselves the Histology class, whatever that is. Anyway, they 've jogged out the State highway intending to take the back shore at Race Point. The talk is that some big-wig at the college has offered cash prizes for odd things in animal and plant life, so the class came here on their spring vacation."

Billie was not yet wholly recovered from his discomfiture at the lawyer's parting words. He listened as one but little interested, yet murmured disdainfully, "Huh, what plant or animal life is there on the dunes, or on our back shore?"

"Oh, they 'll find things all right," Bob declared with energy. "It 's a walking laboratory, Billie. Microscopic and a lot more things we chaps down here would n't know how to handle, or want to know perhaps, but that 's not what I 'm driving at. George Corea met them and he says it 's fine—they 're out for fun, all of them, and there 's high jinks every minute—pranks on each other—college yells and songs, and—but I say, Billie, let 's trudge over to Race Point and see the show ourselves. Will you?"

Billie seemed lost to the words as he gazed afar out over the placid waters of the beautiful harbor. Suddenly, however, he roused himself. "I can't, Bob—that 's a fact! I 've heard all you said, but all the while I 've been thinking of what Mr. Hardy said to me just now. He said while the fleet was chasing some two hundred miles after them, he believed the fish were right here at our back door. I 've got an idea, Bob, it 's this: Josh Hardy is a mighty shrewd man. He 's what they call a close observer. He is n't a fisherman, as he says, but his fathers before him were, and no doubt he knows a lot more about the business than he lets on. Anyway, I 'm going to act on his suggestion. I 'm going out to the grounds in the *Nettie Ann!* Father 's away now and it 's up to me to save the sloop. Yes," he repeated determinedly, *"I 'll save the sloop!* I 'll do it now, too!"

"Alone?" queried Bob in wonderment.

"No! Not if you 'll come with me! Will you? Dare you? *Dare you?"*

Billie was intensely excited and his keen eyes searchingly scanned the face of the boy before him.

Billie was a tall, husky lad; every ounce of his well-knit frame seemed to be bone or muscle. In school athletics he was a tower of strength alike on diamond and gridiron, and therefore was a general favorite among the boys.

Two years his junior, considerably shorter in stature, yet none the less sturdy, was Rob Taylor. Both were Provincetown boys. Provincetown is essentially a fishing town, about half a dozen fisheries contributing to its maintenance, and so each had been born and reared in the exciting atmosphere of seagoing life.

Bob was quick to answer Billie's question. In a quiet businesslike way he said, "I 'm your man, Billie. When shall we start?"

"Right now, Bob! You go down to the wharf, will you, and get the oars and all the truck out of the shed and into the dory. I 'll skip home for the food part of it and the toggery and to mention to that little mother of mine that I 'm going out with you for the night. Lively, Bob, for we 've got to be on the grounds within three hours, sure, that 's sunset."

"Together, Bob, up goes this jib! Now, then, a-hoy! Up she goes. Sway away! Sway! *There,* that 's done—and all right too—*good!* Now, up comes the anchor! Bob, old man, we 'll have both hands full now! No, sirree, I 'm blessed if it is n't the light bower! Hurrah for my dad! Come on, Bob. Up she comes—and then away we go!"

The mackerel season that spring was a dire failure, and, while there was little prospect for a very large catch, unless "down Nova Scotia way" and too far for the boys, yet a moderate success of seining so near to Boston would be profitable. A short run to the city and the fish would bring a high price as *fresh* fish.

"Just think of it, Bob," said Billie, "if they average only twenty-five cents a piece we will only

have to catch twelve hundred to make three hundred dollars!"

By the time they arrived at the place they hoped would prove good fishing-grounds it was quite dusk. They threw a buoy overboard, and, bringing the dory close up, tumbled into it, and pulled away into the gathering darkness.

No easy task that was before them.

Picking up the buoy they rowed for some distance and then after placing a lighted lantern at the top of a short pole which passes through it, they brought forward and securely fastened to the buoy the first end of the first of a long connected line of nets, each eighty yards in length, and tied end to end. The top, or cork rope of these nets floats, while the bottom or foot rope, between which are eighty meshes, sinks to a depth of eighty-four inches.

The sloop's bulky form offered a surface upon which wind and current pushed and pulled, and tug, tug, tug, the *Nettie Ann* steadily drifted backward, not alone keeping the line of netting straight and untangled, but forcing Billie to work as only one can backed by a stout heart and willing spirit.

Night came on—and utter darkness. But they lost no time in pulling up the nets that were set first and taking out the mackerel caught by their gills in the meshes. After emptying one net they would drop it back in the water and proceed to the next one; and so on to the end of the row of nets and then back to the beginning, the buoy of the first net being marked by a lantern. The luck was poor—only about a hundred having been landed by this laborious process. They had to work quickly, for the dog-sharks were thick, and made short work of the imprisoned mackerel.

Billie and Bob had taken turns. First Billie would row out the dory and draw the nets, then they would change places. About one o'clock, as they had reached the last net, Billie felt a decided resistance to his first cautious pull; then he pulled harder and the net did not yield.

"I wonder what the mischief I 've got this time, Bob," he called to his companion back in the sloop. "I can't budge the net!" He knew, however, he was too far off to be heard.

He leaned over as far as he dared and drew cautiously on the foot-rope. Instantly the great stretch of moonlit water about him yielded to a disk of luminosity that was churned out from the center of the net which shook and thrashed violently about while the little dory was like a cork upon a raging sea. At the same moment he saw two widely opened jaws which disclosed rows of wicked-looking teeth. A half beast, half fish-like monster head with great glassy eyes became silhouetted against the background of phosphorescent water.

Billie Mitchell was horrified! A wild terror seized him and he was about to let go the rope when there flashed upon him the words uttered by his lawyer friend but a few hours before: "No matter how dark things look, don't lose your grip. Hang on to the situation and something will surely happen." The words rang in his ears. "Hang on! Hang on!"

"I *will* hang on," the boy exclaimed determinedly. "I 'm up against something awful, that 's certain, but *I 'll hang on!*"

Seemingly the creature had previously exhausted its strength in its maddened efforts to break away from the weak but yielding meshes that hampered its movements, for the violent lashing soon ceased, fortunately for Billie, as his well-laden dory was far from being on an even keel, and might have overturned and left him at the mercy of the strange, unknown monster.

"This net cost father eighty dollars. I 've got to save as much of it as I can," Billie said firmly, and securing the portion of the slack in his possession by placing it against the gunwale and bearing his knees heavily upon it, he again leaned over, and drew in, slowly, carefully, a long, hard, even pull, and again came the frenzied struggle of the entangled monster.

"If I lose—you win," Billie muttered determinedly. "The whole net will be ruined, too, and the catch lost. I 'll try again. Perhaps you are strangling yourself, though, you old critter; yes, I guess that 's exactly what 's happening. Now I can see that the cork rope is wound about those big forward fins, and the more you fight, the more tangled up you get. Yes, I 'll hang on!"

Again he secured another promising portion of the eighty yards of netting and again were the waters churned, and so the fight went on, and again and again was it on, and the long hours of the night rolled away. In the far eastern sky was a streak of gray; day was dawning!

"Ahoy there, Billie! Ahoy!" shouted a voice from—somewhere.

Billie recognized the voice of the lawyer, and looked up from the net.

A launch was bearing down upon him, and the next moment was amidships starboard.

"This is Professor Higgins, Billie," called Mr. Hardy cheerfully, "an old college friend of mine. He 's down on the Cape with some of his class, as no doubt you heard yesterday. We 've been having a night of it, fishing off here in the good old way, hand lining, they call it. I took twenty-six to his twenty, all good small mackerel too—but what 's wrong here, anyhow? We boarded

"I *WILL* HANG ON,' THE BOY EXCLAIMED DETERMINEDLY."

the *Nettie Ann* just now, and had a chat with the youngster. He 's half wild at your non-appearance. What 's the trouble?"

"Go around on the port side," Billie said quietly. "Keep at least ten feet astern or something might happen." Then to make something happen he pulled in hard on the rope and there followed a mighty upheaval of the waters.

The professor stood up aghast until the struggles ceased, then he gazed into the sea and the next moment was prancing about like a madman.

"Oh! Oh! Hardy, Hardy! Look, will you! Look! The pirate of the ocean! Nothing beneath the waters can withstand it! Fish of every description flee before it as do the animals of the jungle before the jaguar! It's a king killer-whale! Oh, what a rare specimen it is! Twenty feet in length at least! Boy, how much will you take for it?" he called eagerly.

"Three hundred dollars," Billie hazarded, the amount of his parent's indebtedness being naturally the first figure to come into his mind.

"Then it is mine!" the professor fairly shouted. "Mine, mine! I shall myself mount it, and what an addition it will be to my labora—"

"Hold on, professor, it is n't yours yet," the lawyer broke in quietly. "You 've got to make fast to it first. Run alongside again, will you, so I can get into that dory with my young friend; then you go back to the *Nettie Ann* and get whatever tackle you think you will need."

The excited professor was already again amidships and as his companion stepped into the dory, he speeded away the launch at a terrific pace.

Going forward, Mr. Hardy leaned over the boy's shoulder and said kindly, "What a night you 've had of it, Billie, but your work is almost over, this king of the sea is all but exhausted now, I take it! This all proves you possess one excellent trait in your make-up. Do you know what I mean?"

"No, sir, what?" Billie mumbled from between set teeth, for his heart was a bit bitter toward this man, for was n't he going to take away the sloop from his father? How could he but be bitter?

Unheeding his tone the lawyer answered gently: "Perseverance! You are not the boy to lose your grip. Beyond question you have got a good fare, Billie. Yes, I think it will prove a fine haul, and when the professor secures this monster, we will both help you draw in the nets. If I mistake not, a good, fresh easterly will come up with the sun, and with that behind her all the way, the *Nettie Ann* will get to Boston in less than no time."

"Did you see my father?" the boy ventured to ask, his lips quivering while he tried to be brave.

"No, I did not," Mr. Hardy answered quietly, and, taking an envelop from an overcoat pocket, he continued: "See, Billie, bear witness that I tear up the notice and cast away the pieces! I have changed my mind about the disposal of the sloop, and before noon to-day I shall deed it over to you in your own name."

"Mine? My own?" Billie cried in joyous astonishment.

"Yes, your own," Mr. Hardy said cordially. "I admire pluck, my boy. You have had here something to test your nerve and perseverance, and you have won! All the world loves a hero. Yes, Billie, the *N. A.* is your own property. You 've earned it, well earned it. You 've caught a big catch this time, and here comes the professor. Good luck to you, Billie!"

THE FLYING DUTCHMAN

MANY, many years ago a Norwegian skipper named Daland was sailing homeward one evening after a long and successful voyage.

His heart was filled with longing for the sight of his only child, the beautiful dark-eyed Senta. And as he walked back and forward on the narrow deck of his swift-sailing ship, he thought joyfully, "To-night I shall be home, and shall hold in my arms once more my beloved daughter."

As night fell, the wind began to sing and hum among the snowy sails; dark clouds scudded across the starry sky, and now and again heavy rain fell with a hissing noise on the deck.

"It is only a squall," the captain shouted to his crew, "and will go as suddenly as it has come."

But by midnight the singing of the wind had risen to an angry shriek. The masts swayed and bent beneath the burden of the wind-filled sails, and huge waves crested with foam raced madly onward, lashed by the fury of the storm.

Daland soon knew that this was no passing squall, but a storm in which it would be dangerous if not impossible to sail past the rocky headland, beyond which lay the sandy bay he had hoped to reach that night. With a disappointed

heart he gave orders that the sails should be closely reefed. He then altered the vessel's course and steered for the shelter of a rocky cove. Under its lee he could wait till the storm was past.

"Never do I remember a storm so sudden and so fierce," he said to the sailors. "Heaven help all those who are on the open sea this night."

Scarcely had he spoken when a flash of lightning, closely followed by a loud peal of thunder, lit up for an instant the angry sea, and from the helmsman came the cry, "Ship ahoy, ship ahoy!"

Daland rushed to his vessel's side and saw the lights of another ship entering the cove. He heard a clear voice of command ring from the stranger's deck. A heavy anchor was let down, and soon the newcomer swayed on the heaving waters close beside the Norwegian vessel. Worn and battered the stranger's ship appeared—a gloomy ship with blood-red sails, which the sailors were silently lowering.

No sound of voices was heard on board, no laughter to tell of rejoicing over deliverance from the terrors of the storm. In silence the vessel lay, and the Norwegian sailors, who had been eager to offer words of question and of welcome, turned away from a crew which appeared so unfriendly.

But presently the captain hailed Daland and invited him to come aboard, and in the stranger's cabin they spent the long night hours. Then, as the sun rose, the storm slowly died away.

"I have wandered much," said the stranger to Daland, "over unknown and distant seas. Wealth of gold and silver and pearls is mine, safely hidden in secret coffers within these cabin walls. But now I long for rest and home. How gladly would I give half my treasure could I find a maiden who would love me truly and be my wife. In Norway I mean to seek her, for they tell me that the maidens of Norway are loving and fair. What sayest thou who knowest them, noble Daland?"

Daland was greatly attracted by the stranger's noble look and manner. His face was very handsome, with delicate, clear-cut features that looked as if they were carved in ivory, so colorless was the skin. But it was the stranger's eyes that fascinated Daland most; dark, beautiful eyes that Daland felt were the saddest he had ever seen.

Daland's own eyes shone with eagerness when he heard of the treasures of gold and pearls hidden so close beside him, and his thoughts flew to Senta.

"It is not for me, noble stranger, to say whether our maidens are as thou believest; but I have a daughter at home, and if thou wilt come with me to-morrow, for thyself thou canst judge if she be fair, and well can I vouch that she is loving."

The stranger readily agreed to sail with Daland next day, and they parted. But Daland could not sleep for thinking of the riches that might so soon be his. How often he had longed to find a noble and wealthy husband who would be worthy of Senta! Surely never had a storm brought such good fortune to any captain.

At sunrise the two ships weighed anchor, and in the golden light of dawn they left the shelter of the little cove and steered for the rocky headland beyond which lay the sandy bay where Daland lived.

High on the rocky cliffs, which rose like a wall on two sides of the sandy bay, stood Daland's home. It was a low white house, standing back from the edge of the cliff in a garden, and well sheltered by the pine-trees which clothed the steep slopes for many and many a mile.

Senta's mother had died when she was a baby, leaving the little dark-eyed daughter to keep her memory green in the heart of her sailor husband. And Daland, as he looked now on his daughter, saw again the fair young maiden whom he had loved and wooed eighteen years ago. The love of both husband and father he now lavished on his child.

During his long absences at sea, Dame Mary, his mother's old nurse, kept Senta company and looked after the house. In the long winter evenings the village maidens would gather in the big kitchen beside the open fireplace, where pine-logs blazed with a cheery sputter. Then, while their spinning-wheels hummed busily, Dame Mary told tale after tale of fairy and witch and wanderer whose doings had been the delight of her own youth. Many a ballad she had taught to Senta.

"The child is overfond of these old-world songs," she would say to Daland, half complainingly, "and her wheel stands idle while she sings, which is not the way my mother taught me the hours should be spent."

But the father always met these complaints with a smile.

"Let be, let be, Dame Mary," he would say; "Senta is still but a child. There will be time enough to spin when she has outgrown this love of childish tale and ballad."

And indeed few could have found it in their heart to scold the lovely, dream-eyed maiden. Except in song, her voice was rarely heard, and her slender, graceful form moved silently about the house and garden. But Senta's favorite haunt was the edge of the rocky cliff at the foot of which rolled the sea.

Here she would sit hour after hour, watching for the first glimpse of her father's ship, she told Dame Mary; for Senta knew that her old nurse would not understand if she spoke of the fascination which drew her again and again to watch the play of light and shadow on the face of the silent sea.

And when the storm-winds blew, and the roar of the great waves as they hurled themselves against the rocky cliffs was heard in the low white house in its sheltered garden, then the tumult of the wind and sea seemed to enter Senta's blood. She would roam from room to room in a fever of unrest, longing to be like the sea-gulls that floated on airy wings in the heart of the hurricane.

On the wall of the kitchen hung a portrait which was noticed by every visitor, and which Daland thought was strangely out of keeping with the simple furniture in the big old room. No one could be quite sure whence it had come; but Dame Mary, who knew most old tales connected with the family, believed that Daland's grandfather had brought it home as his share of the spoil from a wrecked ship that had drifted into the bay. "And a sad-faced, wicked-looking man I think he is," she used to add. "I feel sure he has had dealings with the Evil One." Then Dame Mary would make the sign of the cross and mutter a prayer that Heaven would keep her from such a sin.

But Senta loved the picture. To her the man's face was filled with deep sadness and longing without any sign of evil, and there welled up in her heart a great pity for the sorrow which was graven so deeply, and a longing that by her love she might in some way have lessened it.

Many a time, when Dame Mary was busy at the other end of the house, Senta would sit with folded hands gazing at the picture, her eyes filled with dreams. For long she had wondered what sorrow there could be so great as to bring that look of sadness into a man's face. But now she knew.

One wintry evening, when the storm raged more fiercely than usual, and shook the walls of the low white house, Dame Mary had told a tale of one whose face, Senta thought, might have looked like the portrait on the wall.

It was a tale of the sea, of a night of tempest and hurricane long, long ago, when a ship with close-reefed sails and anxious crew was struggling to round the Cape of Good Hope, that cape of storms so dreaded by all who sail the sea. Again and again the howling wind and the angry sea drove the vessel back, but with each defeat the captain's anger rose, and again he would renew his efforts to round the point. All night they battled; and when morning drew near, a worn and weary sailor ventured to ask the captain, "Shall we not give in and run for the shelter of the bay?"

But with blazing eyes and angry voice the captain shouted with a terrible oath, "May I double the Cape this night even if afterward I must sail forever!"

And the wish was heard. An evil voice spoke mockingly in the captain's ear: "In winter and summer, in storm and sunshine shalt thou sail, ever longing for rest, even the rest of death, and ever condemned to fare onward. Only one hope is thine. Each time that seven years pass thou mayst land, and shouldst thou find a maiden who will love thee unto death and join her lot with thine, then shalt thou be free."

Many and many a time had the seven years' truce arrived, and with hopeful heart the captain had sought for the maiden who should free him from his fate, but the search had always been in vain.

By sailors the "Flying Dutchman," as the captain came to be called, was dreaded, as bad luck and storms were sure to follow in his track.

And so, shunned by man, and under the curse of Heaven, he wandered from age to age across the homeless sea.

Senta loved this tale better than all others, and in her heart she wished that hers had been the chance to offer her love and her life to save the wanderer.

But besides Dame Mary there was one who little liked the maiden's dreamy fancies. Erik, the young huntsman, had loved Senta since they had played together as children. He was poor, and Daland, he knew, had higher hopes for the future of his only child than to wed her to a penniless hunter. But Senta liked well the handsome, fearless youth; and only three days before, Erik had drawn from her the avowal that no living person came nearer in her regard than he. Filled with hope, he now longed for Daland's home-coming that he might ask his leave to woo his daughter.

Great were the joy and excitement when word was brought that Daland's ship and another were entering the bay. The village maidens ran to the beach to welcome the voyagers, while Senta and Dame Mary made ready a plentiful meal in the big old kitchen.

"Daughter, I bring thee a good friend whom I hope thou wilt heartily welcome," was Daland's greeting to Senta as he clasped her in his arms.

When Senta raised her head from her father's bosom the color fled from her cheeks, and sur-

prise and fear filled her heart. Before her stood the living image of the portrait on the wall. The man with the saddest of sad faces was by her side, and a low, tired voice was begging for welcome.

"It seems to me as if I had known him all my life," said Senta to Daland, giving her hand to the stranger, who gazed with eager eyes at the fair young face so steadfast and loving.

Right happy was the meal that sunny morning. Daland was overjoyed to be once more at home, and he had noticed with pleasure how heartily the shy Senta had welcomed his new friend.

"I shall let him tell his own tale," he said to himself. "With a young girl like Senta that handsome face will more quickly win approval than mention of gold or jewels." And his eyes sparkled as he thought of the good fortune that lay before his child.

Dame Mary was always tearfully thankful to see her master safe home again. During her long life she had seen many ships sail bravely from the harbor away to the crimson west, but she could never forget that not always had they come back again, and the fishing-village held many homes where wives and daughters mourned for those gone down in the great waters.

To the stranger the sight of this peaceful home life was like a glimpse of heaven; and as he looked on Senta's sweet face, once more a gleam of hope stole into his heart, and he made up his mind to tell her his pitiful tale.

And for Senta the whole world thrilled with happiness. The hero of her dreams sat by her side, and she knew in her heart that behind the beautiful face of her father's guest lay hidden a depth of sorrow which she alone could sound.

In the garden, alone with the stranger, she listened while he told the tale of his weary wanderings under the evil spirit's curse, and his voice faltered as he said: "Senta, couldst thou love me with a love faithful even unto death, that deliverance might be mine?"

And the sadness in his face gave place to a look of joy and hope as the maiden answered: "I have loved thee for long with the strongest love in my heart, and faithfully will I follow thee even unto death."

By evening it was known in all the village that Senta was betrothed to the captain of the stranger ship, and that Daland had found a noble and wealthy son-in-law for his only child. By his orders the villagers carried food and wine to the sailors of both ships, that they might feast and drink good luck to the coming bridal.

With right good will the men on Daland's ship made merry, and sounds of song and laughter floated across the bay. But presently it was noticed that silence reigned among the stranger crew. Not a rope was moved, not a voice was heard till after the sun had set. Then strange mutterings as of a coming storm filled the air; the blood-red sails of the gloomy ship fluttered as with wind in the still evening, and blue flames were seen to flicker round the bows of the mysterious vessel. No sailors were seen, but harsh voices sang songs of murder and hate and wickedness, while hideous laughter followed each cruel verse.

The sailors in Daland's ship grew silent, and fear struck a chill to their hearts.

"I know that ship," whispered an old sailor, who had come from the village to welcome his grandson; "it is the Flying Dutchman's, and her captain and crew are under the power of the Evil One. God send that no ill-gotten treasure will tempt Daland to give his daughter to one so doomed." And the sailors crossed themselves and went below in fear.

Erik the huntsman, who had been on the hills all day, and had just come on board to join the merrymakers, heard all that was said by the old sailor. In great misery he went ashore to seek for Daland, and warn him of the true nature of his guest.

On the cliffs he saw Senta gazing seaward with dreamy, unseeing eyes.

"Is it true, Senta," he asked, "that thou hast promised to marry the stranger captain?"

"Erik, it had to be," answered Senta. "All my life have I been waiting for him, and now my heart calls me to follow him throughout the world."

"And what of thy promise to me, false maiden?" burst from Erik angrily. "Knowest thou that this man is under a curse, and that earth and sea alike refuse shelter to him who hath made a vow to the Evil One? Thy love is mine! But three days have passed since thou toldest me that no living person came nearer to thy heart than I. As my promised bride I claim thee now."

Erik seized Senta's hands to draw her to him. As he did so a dark shadow came from a corner of the rocky cliff, and a voice of deepest sadness was heard to say, "Thou too art false, and I am lost, lost, lost."

It was the voice of the stranger, who now ran down to the beach calling, "To ship, to ship! Once more to sea we go!" and as the captain sprang on board, the blood-red sails of the gloomy boat were hoisted by the ghostly crew, and the vessel put out to sea.

Senta stood for a minute spellbound by the

stranger's sad words, then she cried: "Stay, oh stay! I am thine and thine only; I will go with thee even unto death!"

But the captain heard her not, already the blood-red sails of the ship were stiffening to the breeze, and the white foam flew from the vessel's bow.

Senta cast a farewell look at the low white house and garden, and at the brave young huntsman lover who stood by her side. Then she ran along the cliff to where it overhung the sea, and crying, "I come, I come!" she threw herself down into the restless waves.

As she fell a beam of light shot from the rosy clouds which still lingered in the sunset sky, and those who were watching saw the vessel disappear, while the forms of Senta and the Flying Dutchman, with hands closely clasped, ascended on the golden pathway toward the glories of the west.

And all knew that Senta's faithful love had set the wanderer free, and he might now find rest.

ROLF'S LEAP

BY GEORGIANA M. CRAIK

"What, you 're making friends with my old Rolf, are you, boys? dear old Rolf!" said Uncle Dick; and, at the sound of his voice, away broke Rolf from the two lads, sending them right and left like a couple of ninepins, and, bounding forward, lame leg and all, had got his faithful head, in another moment, pressed against his master's side, and was wagging his tail—which was as thick as a fox's brush—so lustily that he wagged a pretty red rose, close beside him, all to pieces, and sent its petals in a shower over the gravel path.

"That 's my good old dog!" said Uncle Dick, and stroked his favorite's shaggy back, and pulled his long black ears, and shook the paw that (quite in defiance of the rules of common society) Rolf kept solemnly presenting for his acceptance at least a dozen times over.

"He has been going on with such fun—licking our faces, and putting his arms on our shoulders; and he rolled Tommy right over on the grass," said Will, the elder of the two boys. "Tommy tried to get on his back, and he did n't like it and tumbled him off."

"Of course he did n't like it," said Uncle Dick. "You would n't like to have anybody get on your back if you were lame of one leg; at least I know *I* should n't; I 'd tumble him off fast enough. Tommy may do anything else he likes, but he must n't try to make Rolf carry him—must he, old Rolf?" said Uncle Dick, in his tender voice. On which inquiry Rolf gave such a loud, decided, instant "Bow-wow!" that it was quite clear he agreed with his master entirely, and had, indeed, the very strongest possible feeling on the subject. "Bow-wow!" said Rolf, in his very deepest tones; and he said it with such an unnecessary amount of energy, that both the boys burst out laughing; whereupon Rolf wagged his tail again, quite delighted, and wrinkled up his nose and laughed too; for Rolf was a fond old fellow, and liked to be noticed, and listened to, and made much of, just as you or I might.

The two boys and Uncle Dick began to walk round the garden, and Rolf, who was a well-taught dog, set himself to follow them with great propriety, whisking his tail about, indeed, rather more than was necessary as he went, but quite unconscious that he was doing any harm by that (though, to tell the truth, he was, for every now and then he whisked a flower right off its stalk, or upset a flower-pot, or did some other equally improper thing with that fine black brush of his); and presently they came to a summer-house, where, as it was very hot, Uncle Dick was glad to sit down, and where Rolf (knowing quite well that the right place for him was with his master, wherever that might be) made a decided stand, too, and—only waiting long enough to make sure that Uncle Dick's pipe was alight, and that he was likely to sit still for a comfortable quarter of an hour—stretched himself out at full length on the ground, and laid down his head upon his paws, and gave a sigh, and shut his gentle old eyes. And then Uncle Dick smoked under the vine-leaves and Will and Tommy played in the sunshine till they got all ablaze with heat.

They came to take shelter at last in the arbor too, just as Uncle Dick was knocking the ashes out of his pipe.

"You 've got fine red cheeks, boys," said Uncle Dick, "and two pairs of sturdy legs. Rolf and I would like to be able to jump about like you—but *our* jumping days are over. Not but that Rolf took a finer leap once than either of you lads ever has done yet," said Uncle Dick, after a moment or two; and he stooped down to pat his

favorite's great head. "A noble leap, was n't it, my old dog?" he said; and Rolf looked up with his gentle eyes, and, being too sleepy to say much, but yet, no doubt, understanding the question quite well, just gave a little flap with his tail, as if to reply, "Ay, ay, master, it was n't so bad a leap, as leaps go," and then composed himself to sleep again, as if it was such an old story that he could n't trouble himself to wake up and think about it.

The boys had sat down to rest; and so Will said, "Tell us what sort of a leap Rolf took, Uncle Dick."

"If you 'll keep your feet still, then, I 'll tell you," said Uncle Dick; and accordingly, when Tommy had stopped rasping the gravel under his boots, he told this story to them:

"We were both of us younger than we are now," he said, "when Rolf and I first came together. Rolf was a puppy, for his part, and I rather think I was a puppy too. At any rate, I had fifteen fewer years upon my shoulders than I have to-day and fifteen years' less wisdom. (Always grow wiser every year as you grow older, boys, and you will come in time to be as wise as—Uncle Dick!) It was just when I was going out to Africa that some one gave Rolf to me. 'He comes of a fine stock, and if he proves as good a dog as his father, you won't part with him at the end of a year for a trifle,' my friend said; and I soon found that he was right, for I tell you, boys, by the year's end I would n't have parted with him, not if I had parted with my last shilling, and I 'd been asked to sell him for a thousand pounds. I 'd sooner have sold myself, if I must have sold one or the other of us.

"Ah, you 're laughing, I see. You think I 'm speaking in fun? Not a bit of it! Listen to my story, and when I get to the end of it you shall laugh, if you like.

"I went out with my regiment to Africa, to the Cape of Good Hope, and before I had been there six months I fell ill with fever, and had it so badly that I thought—and others besides me thought, too—that I should never see home again; and I don't believe I ever should if I had n't had the kindest black servant to nurse me—the best nurse a man ever had—and this poor old fellow here to help to keep up my spirits, and to show me that, at any rate, there was one creature in the world who could n't afford to let me die.

"Poor Rolf! Why, boys, if he had been a Christian he could n't have done more for me all the time that I was ill. Night or day he never left my room. They could n't get the faithful beast away. I knew little enough about his being near me, part of the time, but that made no difference to him; he stuck by me all the same, and when I began to get better, and to know him and notice him again—well," said Uncle Dick, abruptly, "I think it was a thing to touch a man's heart if he had any heart in him. Upon my word, boys, I did n't believe there had been anything alive that would be so glad to see me living as Rolf was. When he threw himself upon me the first time I called him by his name and held out my hand to him, you would think me an old fool if I were to tell you what the sight of his joy made me do. I was very weak, remember; I was just as weak at that time as a child, you know.

"Well, I got all right again after a while; and let me tell you, in passing, that, after this one illness, I never had better health in my life than during the rest of the time I spent in Africa. I stayed there four years, and they were as happy years, on the whole, as I ever spent anywhere. I saw a great number of new things in the course of them and I made a great number of very kind friends. We were n't very hard worked out there, and many a pleasant expedition did I have of a few days up country or along the coast, sometimes with a companion, sometimes alone, with only my horse and old Rolf. I shall never forget some of those little excursions. I shall never, at any rate, forget one of them, for it was in the course of one of them that Rolf took his leap.

"I had been riding for five or six miles one pleasant afternoon. It was a delicious afternoon, like the afternoon of one of our own days. You always imagine it hotter out in Africa by a good deal than it is here, don't you? Well, so it is, in a general way, a vast deal hotter; but every now and then, after the rains have fallen and the wind comes blowing from the sea, we get a day as much like one of our own best summer days as you ever felt anywhere. This afternoon the fresh sweet breeze was rustling among the green leaves, and I saw the great bright sea stretching out all blue and golden, and meeting the blue sky miles and miles away.

"It was n't very hot, but it was just hot enough to make the thought of a swim delicious; so after I had been riding leisurely along for some little time, I alighted from my horse, and, letting him loose to graze, lay down for a quarter of an hour to cool myself, and then began to make ready for my plunge.

"I was standing on a little ledge of cliff, some six or seven feet above the sea. It was high tide, and the water at my feet was about six feet deep. 'I shall have a delightful swim,' I thought to myself, as I threw off my coat; and as just at that moment Rolf in a very excited way flung himself upon me, evidently understanding the meaning

of the proceeding, and, as I thought, anxious to show his sympathy with it, I repeated the remark aloud. 'Yes, we 'll have a delightful swim, you and I together,' I said. 'A grand swim, my old lad'; and I clapped his back as I spoke, and encouraged him, as I was in the habit of doing, to express his feelings without reserve.

"But, rather to my surprise, instead of wagging his tail, and wrinkling his nose, and performing any of his usual antics, the creature only lifted up his face and began to whine. He had lain, for the quarter of an hour while I had been resting, at the edge of the little cliff, with his head dropped over it; but whether he had been taking a sleep in that position, or had been amusing himself by watching the waves, was more than I knew. He was a capital one for sleeping even then, and generally made a point of snatching a doze at every convenient opportunity; so I had naturally troubled my head very little about him, taking it for granted that he was at his usual occupation. But, whether he had been asleep before or not, at any rate he was wide awake now, and, as it seemed to me, in a very odd humor indeed.

"'What 's the matter, old fellow?' I said to him, when he set up this dismal howl. 'Don't you want to have a swim? Well, you need n't unless you like, only *I* mean to have one; so down with you, and let me get my clothes off.' But, instead of getting down, the creature began to conduct himself in the strangest way, first seizing me by the trousers with his teeth and pulling me to the edge of the rock, as if he wanted me to plunge in dressed as I was; then catching me again and dragging me back, much as though I was a big rat that he was trying to worry; and this pantomime, I declare, he went through three separate times, barking and whining all the while, till I began to think he was going out of his mind.

"Well, God forgive me! but at last I got into a passion with the beast. I could n't conceive what he meant. For two or three minutes I tried to pacify him, and as long as I took no more steps to get my clothes off he was willing to be pacified; but the instant I fell to undressing myself again he was on me once more, pulling me this way and that, hanging on my arms, slobbering over me, howling with his mouth up in the air. And so at last I lost my temper, and I snatched up my gun and struck him with the butt-end of it. My poor Rolf!" said Uncle Dick, all at once, with a falter in his voice, and he stopped abruptly, and stooped down and laid his hand on the great black head.

"He was quieter after I had struck him," said Uncle Dick, after a little pause. "For a few moments he lay quite still at my feet, and I had begun to think that his crazy fit was over, and that he was going to give me no more trouble, when all at once, just as I had got ready to jump into the water, the creature sprang to his feet and flung himself upon me again. He threw himself with all his might upon my breast and drove me backward, howling so wildly that many a time since, boys, I have thought I must have been no better than a blind, perverse fool, not to have guessed what the trouble was; but the fact is, I was a conceited young fellow (as most young fellows are), and because I imagined the poor beast was trying for some reason of his own to get his own way, I thought it was my business to teach him that he was *not* to get his own way, but that I was to get mine; and so I beat him down somehow—I don't like to think of it now; I struck him again three or four times with the end of my gun, till at last I got myself freed from him.

"He gave a cry when he fell back. I call it a cry, for it was more like something human than a dog's howl—something so wild and pathetic that, angry as I was, it startled me, and I almost think, if time enough had been given me, I would have made some last attempt then to understand what the creature meant; but I had no time after that. I was standing a few feet in from the water, and as soon as I had shaken him off he went to the edge of the bit of cliff, and stood there for a moment till I came up to him, and then—just as in another second I should have jumped into the sea—my brave dog, my noble dog, gave one last whine and one look into my face, and took the leap before me. And then, boys, in another instant I saw what he had meant. He had scarcely touched the water when I saw a crocodile slip like lightning from a sunny ledge of the cliff, and grip him by the hinder legs.

"You know that I had my gun close at hand, and in the whole course of my life I never was so glad to have my gun beside me. It was loaded, too, and a revolver. I caught it up, and fired into the water. I fired three times, and two of the shots went into the brute's head. One missed him, and the first seemed not to harm him much, but the third hit him in some vital place, I thought—some sensitive place, at any rate, for the hideous jaws started wide. Then, with my gun in my hand still, I began with all my might to shout out, 'Rolf!' I could n't leave my post, for the brute, though he had let Rolf go, and had dived for a moment, might make another spring, and I did n't dare to take my eyes off the spot where he had gone down; but I called to my wounded dog with all my might, and when he had

struggled through the water and gained a moment's hold of the rock, I jumped down and caught him, and somehow—I don't know how—half carried and half dragged him up the little bit of steep ascent, till we were safe on the top—on the dry land again. And then, upon my word, I don't know what I did next, only I think, as I looked at my darling's poor crushed limbs, with the blood oozing from them, and heard his choking gasps for breath—I—I forgot for a moment or two that I was a man at all, and burst out crying like a child.

"Boys, you don't know what it is to feel that a living creature has tried to give up his life for you, even though the creature is only a soulless dog. Do you think I had another friend in the world who would have done what Rolf had done for me? If I had, I did not know it. And then when I thought that it was while he had been trying to save my life that I had taken up my gun and struck him! There are some things, my lads, that a man does without meaning any harm by them, which yet, when he sees them by the light of after events, he can never bear to look back upon without a sort of agony; and those blows I gave to Rolf are of that sort. *He* forgave them—my noble dog; but I have never forgiven myself for them to this hour. When I saw him lying before me, with his blood trickling out upon the sand, I think I would have given my right hand to save his life. And well I might, too, for he had done ten times more than that to save mine.

"He licked the tears off my cheeks, my poor old fellow; I remember that. We looked a strange pair, I dare say, as we lay on the ground together, with our heads side by side. It 's a noble old head still, is n't it, boys? (I don't mean mine, but this big one down here. All right, Rolf! We 're only talking of your beauty, my lad.) It 's as grand a head as ever a dog had. I had his picture taken after I came home. I 've had him painted more than once, but somehow I don't think the painters have ever seen quite into the bottom of his heart. At least, I fancy that if I were a painter I could make something better of him than any of them have done yet. Perhaps it 's only a notion of mine, but, to tell the truth, I 've only a dozen times or so in my life seen a painting of a grand dog that looks quite right. But I 'm wandering from my story, though, indeed, my story is almost at an end.

"When I had come to my senses a little, I had to try to get my poor Rolf moved. We were a long way from any house, and the creature could n't walk a step. I tore up my shirt, and bound his wounds as well as I could, and then I got my clothes on, and called to my horse, and in some way, as gently as I could—though it was no easy thing to do it—I got Rolf and myself together upon the horse's back, and we began our ride. There was a village four or five miles off, and I made for that. It was a long, hard jolt for a poor dog with both his hind legs broken, but he bore it as patiently as if he had been a Christian. I never spoke to him but, panting as he was, he was ready to lick my hands and look lovingly up into my face. I 've wondered since, many a time, what he could have thought about it all; and the only thing I am sure of is that he never thought much of the thing that he himself had done. That seemed, I know, all natural and simple to him; I don't believe that he has ever understood to this day what anybody wondered at in it, or made a hero of him for. For the noblest people are the people who are noble without knowing it; and the same rule, I fancy, holds good, too, for dogs.

"I got him to a resting-place at last, after a weary ride, and then I had his wounds dressed; but it was weeks before he could stand upon his feet again, and when at last he began to walk he limped, and he has gone on limping ever since. The bone of one leg was so crushed that it could n't be set properly, and so that limb is shorter than the other three. *He* does n't mind it much, I dare say—I don't think he ever did—but it has been a pathetic lameness to me, boys. It 's all an old story now, you know," said Uncle Dick, abruptly, "but it 's one of those things that a man does n't forget, and that it would be a shame to him if he ever *could* forget as long as his life lasts."

Uncle Dick stooped down again as he ceased to speak, and Rolf, disturbed by the silence, raised his head to look about him. As his master had said, it was a grand old head still, though the eyes were growing dim now with age. Uncle Dick laid his hand upon it, and the bushy tail began to wag. It had wagged at the touch of that hand for many a long day.

"We 've been together for fifteen years. He 's getting old now," said Uncle Dick. And with this remark he ended his story.

"EVERYBODY WAS WAITING IN ALMOST BREATHLESS INTEREST TO SEE WHAT WOULD HAPPEN."

SAM BENSON'S AUTOMOBILE

BY FRANK S. BALLARD

Sam Benson must have been what you sometimes hear people call a mechanical genius. Anyway, machinery had always possessed a powerful fascination for Sam, and he exhibited a truly remarkable precocity in rigging up contrivances that would go or had motion in them.

He gave early evidence of the bent of his mind by using for making machines empty thread-spools and bobbins, set on whittled wooden axles, connected by beltings of twine, and made to revolve by the use of weights or cast-off clockwork.

Later, the brook which ran through the meadow in the rear of his father's barn was discovered by Sam as a source of power. A dam was built, and a good-sized overshot water-wheel set up, from which power was carried to the barn by means of a small rope belting, and a jig-saw and small grindstone could be run by this power; this had proved to be a really practical labor-saving contrivance.

And all the neighbors knew about Sam's windmill. He had built a mammoth windmill, and had set it up and attached it to the pump in his father's yard; and it would pump all right, too, when the wind blew; for one night when it was calm Sam neglected to detach the connections between the pump-handle and the windmill, and a good breeze springing up during the evening, the mill turned the whole night long and pumped the

well dry; the dooryard was flooded, and the Bensons had to lug water from the neighbors' houses for the next two weeks.

During a recent summer a pushing patent-medicine firm sent out a man in an automobile. He traveled from town to town in the machine, distributing the advertising matter, and in the course of time arrived in the country village where Sam Benson lived.

None of the villagers had ever seen one of the odd-appearing horseless carriages, and many had not even heard of the existence of such a thing. It created no end of talk and wonder among the people, and the circus itself would have taken second place in public interest if it had arrived in the village while the man with the automobile was there.

As for Sam Benson, he could n't get a good night's sleep, owing to the train of thought the automobile aroused in his inventive brain. He spent almost every hour the automobile man was in town in looking over the machine and studying the different parts of its mechanism. He got more rides on it than any one else, asked questions until the man grew weary of answering him, and by the time it had departed Sam had a first-rate idea of what made an automobile go, and of how it was put together.

About a month after the departure of the automobile, it was reported among the boys in the village that Sam Benson was up to something unusually mysterious in his father's carriage-house. Sam had purposely said not a word to anybody about what he was doing, but finally the secret leaked out. He had taken his chum, Joe Wilbur, into his confidence, and they, with the village blacksmith's help, were building an automobile.

The one thing that made it possible for Sam to build something that would go after the manner of an automobile was this: A summer boarder in the village had had a gasolene-launch that he used on the river, which ran close by the village. One day he ran the launch on the rocks and smashed it all up; nothing was left of it that was good for much except the gasolene-motor, which he sold cheap to a village resident. Later it happened that the man who bought the motor owed Sam's father a debt which he could n't collect, and in time Sam's father took the motor, the only thing he could get hold of to satisfy the debt; thus it was that the motor came into Mr. Benson's hands.

Very soon the motor passed into Sam's possession, and, as can be imagined, was a thing of intense joy to him. He had it fired up, and ran it time and again, but had not put it to any special use up to the time the automobile idea struck him. Now it was going to furnish the motive power for his automobile.

Sam and Joe got hold of a light platform-wagon that had seen better days, but which still possessed a tolerably stout frame and four very good wheels.

With the blacksmith's aid, they dropped four iron hangers down from the body of the wagon, and to these a second platform was attached. On the lower platform the gasolene-motor, which, by the way, was a powerful affair, was firmly fastened.

The back wheels of the wagon were put on a solid axle that turned with the wheels, and on this axle a cog-wheel was set. On the power shaft of the motor another cog-wheel was set, and the two cogs were connected by a chain-gearing.

The front axle of the wagon was attached to an upright bar, with a horizontal bar put on top, so the machine could be steered, and two long iron rods, with little wheels on top, connected with the steam-valve and reverse mechanism of the motor.

Sam's ingenuity suggested all these things; the blacksmith got out the ironwork under his directions. They had to send away for the chain-gearing, and this and other things cost considerable, and Sam had to sell off about thirty of his hens to pay his share of expenses.

Unfortunately for Sam, his knowledge of mechanics was not a trained one. He knew nothing about the rules or mathematics of the science, and he did n't know whether the relative size of the cog-wheels on the motor and the wagon-axle would produce a high speed or low speed, and he did n't care overmuch, either; all he wanted was to have the thing go, and it went all right, as after events proved.

It took just about a month to build the automobile, and when it was finished it was a most mysterious and fearful-looking affair. No one ever saw anything that looked like it before, and there are several now who never want to see anything like it again.

On the eventful day of the trial the boys had had steam up in the automobile all the morning. They had seen the thing move back and forth over the carriage-house floor, satisfying them that it would go; they had tried the steering-gear, the reverse-lever, and everything seemed to work all right and to give promise of a great success.

Soon after dinner, Sam went out in front of the house and looked up and down the road; he wanted to get the automobile out and started without a lot of people gathering round. No one was in sight, and a minute later he and Joe

backed the machine out of the carriage-house and pushed it up the driveway out into the road. In the front windows of the house was every member of the Benson family, their faces wreathed in broad smiles of amusement.

When they got into the road Sam happened to drop a monkey-wrench down into an awkward spot in the machinery, and they had to stop and fish it out. While they were doing this, Mrs. Potter, who lived next door, happened to look out of her window.

"Well, for the land's sake, Ira, do come here!" she exclaimed. "What on earth hes that Benson boy got out there in the road?"

Mr. Potter looked out of the window.

"Well, I swan," he said, "ef that boy don't beat the Dutch!"

"It 's on fire, ain't it?" said Mrs. Potter, who saw the steam curling up from underneath. But Mr. Potter had gone for his hat, and was starting out to see what the contrivance was.

Just then a team came along with three men in it, and, of course, they stopped; various neighbors began appearing at their doorways, and by the time Sam had recovered the monkey-wrench, and made a few necessary adjustments on the machine, there was a crowd of a dozen or fifteen people around him—just what Sam had been trying to avoid.

Sam kept silent or answered questions in regard to the machine in monosyllables, and tried to appear very unconcerned and absorbed in what he was doing. But he was really in a most self-conscious condition, and both he and Joe were so nervous and excited that they were very awkward with their fingers in trying to arrange things.

Finally they both climbed to the seat on the machine. There was an impressive silence, everybody waiting to see what would happen.

Joe gripped the steering-bar, and Sam cautiously opened the steam-valve. There was no response. He opened it a little wider; there was a loud *sis-ss* underneath, and the back wheels of the machine spun round, throwing a shower of dirt on those behind.

Every one in range was hit by the dirt; one man got a wad in his eye and had to have somebody look into it; two little girls had white dresses spattered; and what with the flying dirt and hissing steam, everybody edged off to a respectful distance.

"Set your seat farther back, Sammy, so 's to git your weight more over the back wheels," some one shouted. This was good advice, and Sam and Joe got off and moved the seat back a little; then they got on and tried it again.

This time the machine made a sudden jump forward. One of the front wheels struck a stone, twisting the steering-bar almost out of Joe's hands; the machine made a swoop through the shallow ditch at the roadside, climbed a low terrace in front of the Williams house, carried away four or five feet of a light lath fence around a tulip-bed, went through the tulips, and brought up with one wheel upon the first step of the door-steps.

The bystanders followed, some at a trot, and everybody laughing so they could hardly speak. They all were pleased except Sam and Joe and the woman who owned the tulips. She ran to the front door, and when she saw the tulip-bed she began to rate the boys unmercifully. She kept it up though Sam and Joe apologized and offered to pay her; but finally the woman became so interested in what was going on, she forgot to grumble, and sat down on the door-steps to watch.

The boys pulled the machine back into the road and looked it over very carefully. Everything seemed to be all right about it, and after the examination again they got up on the seat.

In the excitement the reverse lever of the machine had been turned, and the machine was loaded to go backward; but nobody knew this, and the spectators all were lined up in the rear of the machine as the safest place to be.

Again Sam turned on the steam, and this time the machine made a quick, unexpected dash to the rear. The crowd stampeded right and left, and everybody got out of the way except "Fatty Childs," the postmaster's boy, who was only fourteen and weighed two hundred pounds. The machine struck Fatty amidships as he turned to flee, knocked him flat, and ran over his leg.

The bystanders roared as the unwieldy fat boy scrambled to his feet in a frantic effort to escape the scalding steam that squirted in his direction. He was n't hurt much, and limped away, while Sam brought the machine to a standstill and carefully turned the reverse lever.

Once again they made a start, and this time they got away without mishap, and went sailing up the street toward the business part of the village at a good rate of speed, the small boys cheering and chasing on behind.

It was a proud moment in Sam's life. How the people did stare! And it was curious to see the changes on their faces when they saw the machine coming—surprise, wonder, a look as though they could n't believe their own eyes, and then, as they made out what it was, an expression of immense amusement.

People could be seen running out of their door-

"THE DEACON GATHERED UP THE LINES, AND YOU COULD HEAR HIM YELL AWAY BACK IN THE VILLAGE."

yards as the machine passed by, and beckoning to others to come and see. It is safe to say that Sam's automobile caused more talk in the village that day than anything that had ever happened there.

Leading south out of the village was a long, level piece of road known as the Dorset Street Road, and up this road Joe steered the machine.

"Open her up a little, Sam," said Joe, "and let 's see what she can do."

Sam let on a little more steam, and the machine shot ahead at increased speed. It was exhilarating now, and the breeze caused by the smart pace swept coolly back into the boys' faces.

A little way out on the road the boys gained rapidly on a team which proved to be that of Deacon Calkins. The deacon heard the noise and turned round. Maybe he was n't surprised! But there were a whole lot of surprises coming to the deacon. When he saw what the vehicle was he stood up in the wagon to look back. Like all the rest, he could n't comprehend at first, and then, as he took in the situation, a broad grin spread over his features.

The boys rapidly caught up to him, and the deacon was shouting something at them as he pulled one side to let them pass; but he had n't reckoned on his horse.

The horse, hearing the unusual noise, turned its head in a nervous fashion, and caught sight of the machine. One look was enough for that horse. Any decent horse would have been scared. It made one jump that nearly snapped the deacon's head off, and then, with the bit in its teeth, tail up and mane flying, it started on a dead run.

Well, the deacon did n't waste any more time looking at that automobile. He gathered up the lines, and you could hear him yell, "Whoa! whoa, boy!" away back in the village. Sam was scared, and started to shut off the steam; but in the excitement he turned it completely on, and the machine shot ahead at a terrific rate. When he tried to turn the rod the opposite way it just twisted round loosely; it had slipped a cog somewhere.

"Shut her off, Sam!" shrieked Joe, getting on his feet in excitement.

"Can't; it 's busted!" yelled Sam.

"Shall I turn the reverse lever?" shouted Joe.

"Don't do it; she 'd blow up!" yelled Sam.

Maybe that home-made automobile did n't go

when it got the full force of the power! It simply flew. The deacon's horse was running something like a mile a minute on ahead, but it was a fact that the automobile began to overhaul the runaway horse.

"We 're going to run him down!" yelled Joe, who was clinging to the steering-bar for dear life. "I 'm going to ju-m-m-p!" he jerked out, as the machine struck a stone.

"Don't do it; you 'll be killed. Stick to the machine!" shrieked Sam, as his hat flew off and his hair stood back in the wind.

About an eighth of a mile farther on the road ran down in a steep hill, and just this side of the hill was the entrance to the Moore farm.

"If the gate 's open steer her up into Moore's place!" yelled Sam. "If it 's shut run her into the fence and jump. Don't go down that hill!"

The machine kept gaining on the galloping horse and the shouting deacon, and if there had been a hundred yards farther to go they would have rammed him from the rear; but just before they were up to him the horse swept by the entrance to the Moore farm, and on down the hill, in spite of the deacon's frantic efforts to turn him.

As the machine came opposite the entrance to the Moore farm, Joe turned the steering-bar; the machine made the curve with two wheels in the air, and then shot up the short lane and ran right into the farmyard, which was a good field for trouble.

The entrance, fortunately, was up quite a steep incline, which checked the speed of the machine a great deal. In a whirlwind of excitement, the boys were looking for the place where they were going to strike, and never noticed the clothesline, which, as they went under it, caught them in the usual spot, under the chin, and mowed them off from the top of the automobile on to the ground.

The machine kept right on—chased a yelping dog with its tail between its legs up on to the back piazza, frightened a girl at the milk-pans into hysterics, and then, making a short turn, swept down a steep incline, and went, bang! right through the light doors of the barn.

There was a whole lot of live stock in the barn, and as the wheels of the automobile still kept spinning by fits and starts, it raised an awful babel of noises in that barn. And every now and

"DOWN OFF THE HAY SLID A HIRED MAN WHO LOOKED LIKE AN ESCAPED LUNATIC."

then a wild-eyed cow or calf, with, perhaps, a piece of rope dangling from its neck, would make a frantic break out of the broken barn doors, and disappear at a wild gallop that made it look as if it was trying to throw hand-springs, while hens and chickens were fluttering from the windows in all directions.

It seemed a miracle that the boys were not killed outright, but they were not even badly hurt. Just as they limped up to look into the barn there came a tremendous explosion inside, followed by a final distribution of crazed cattle and screeching poultry. And at this moment the little door in the second story of the barn was kicked violently open, and down off the hay slid a hired man who looked like an escaped lunatic. The man did n't have time to find out whether he was going to fall as the result of his jump. And he had barely touched the ground when a couple of young heifers, propelled by the explosion, shot out of the barn door on the jump; the first one butted the man and knocked him flat, and the second one galloped right over him.

Laugh! How Sam and Joe did laugh, in spite of their tumble and mishap! They had been laughed at all day, and it was their turn now.

But smoke now began to come out of the barn; it was on fire. Probably twenty-five people had chased the runaways up the road, and as these arrived they formed a bucket brigade from the pump, and soon had the fire out.

It cost Sam's father a very pretty sum to settle the damages, besides the loss of the motor, which had blown up. As for the deacon, he made the hill all right, and his horse soon stopped running on the level road below.

Machinery still has the same fatal fascination for Sam, and he may make a new automobile, but he 's a little chary now about saying anything to others about his plans for inventions.

PRINCE

BY H. RIDER HAGGARD

Casper Graham stood by a table in his father's workroom, attentively reading something of great interest in a newspaper by the fast-failing light which stole in through the glass door. He was alone; around him on every side were jars, great and small, retorts, crucibles, scales, mortars, pestles, and numberless bottles, empty and full, all arranged neatly upon the shelves against the walls.

Casper's father was a chemist, and prepared nearly all the drugs and medicines used in and about Mount Morgan. He had had a good medical education, and there were a number of poor people living near who preferred to take his advice to that of the regular physician of the place.

On the table, near Casper, stood a large vial, containing a dark fluid. A label pasted around it had these words: *"For Mr. Jenks. 10 drops on retiring."*

A slight sound at the door made Casper raise his head, lay down the paper, and take up the bottle, expectantly.

"Oh," said he, setting down the bottle again, as a little girl, with a flat basket held carefully in both hands, pushed her way in. "I thought you were old Mr. Jenks, Winnie."

"Do I look like old Mr. Jenks?" asked Winnie, laughing.

"Well, no," replied Casper, "I can't say you do; but I have been waiting here for more than an hour, and I wish he would come. Father told me he would be here before dark, and that I must wait and give him this medicine."

"What is the matter with Mr. Jenks now?" asked Winnie, depositing the basket on the table.

"I heard him tell father that he had not slept a wink for seven nights."

"Oh! poor man," said Winnie, pityingly, "I hope this stuff will put him asleep."

"Father said it would be sure to," replied Casper, glancing at the door again, "but I do wish he would come!"

"What have you been reading?" asked Winnie, as she picked up her basket again.

"Another account of the fire in the menagerie."

"Oh! is there more about it to-day?" inquired Winnie, with interest.

"Yes, lots more. It tells just how the elephant ripped up the walls of his house with his great tusks, and walked out and stood close by, looking calmly on at the raging flames; and how the giraffe screamed, and the monkeys climbed off into the trees, and the tiger was so frightened that he could scarcely be persuaded to move, although the fire was creeping nearer and nearer every moment, and—oh, lots! We 'll take the paper home."

"Were any of the animals hurt?" asked Winnie.

"Only Prince, the big lion. You remember Prince, don't you?"

"Oh, yes, I remember him well. He was *so* tame! I should not have minded opening the door for him to walk out."

"I know you tried to feed him," interrupted Casper, "and when you held the cake out he stuck his great paw through the bars, and if the keeper had not pulled you back your arm would have been mangled. You should be more cautious with lions, Winnie."

"But I don't believe that good, mild Prince would ever hurt any one."

"He never will now," said Casper, slowly, "because he is burnt to ashes in the fire."

"Burnt to ashes?" repeated Winnie, with a look of horror. "I thought you said he was only hurt."

"No," replied Casper; "the paper says the fire started somewhere near his cage, and that the smoke was so thick, and the flames so fierce, that it was more than an hour before they could reach it, and that the walls fell in, and they have not even found his bones, because the bricks and rubbish are piled in heaps above the spot where the cage once stood. So, of course, he is in ashes."

"Oh! oh!" said Winnie, sadly. "I wish I could have let him out of his hateful cage that day. Poor thing! how he wandered up and down, and looked at every one as though he were saying, 'Please open the door and let me have just one long run.'"

"Well, he is free now," said Casper, taking up the vial and moving toward the door, to watch through the glass for Mr. Jenks.

"So he is!" said Winnie, thoughtfully. Then she added, quickly, "Oh! Casper, I forgot! I came to tell you something."

"Well?" said Casper, turning back.

"Mother is going to stay with Aunt Eliza this evening because the baby is not well, and I am going home and am to set the table, and we are to have tea all alone! Won't it be perfectly splendid?"

"All right," replied Casper, good-naturedly, "let 's go. Mr. Jenks will come round to the house if he really wants his medicine."

"Yes, he will," replied Winnie. "Let me carry the medicine, and you take the pie. It is a little soft, and wabbles, and I am dreadfully afraid I shall spill it."

"A pie!" said Casper, wonderingly, peeping into the basket.

"Yes," replied Winnie; "and I made it all myself at Aunt Eliza's, this afternoon. I put heaps of mince in it, and raisins and orange-peel and all kinds of things, and it is lovely."

"Then what makes it wabble?" asked Casper, doubtfully.

"That 's because the crust is very, very rich," explained Winnie, "and the mince very, very juicy."

"Well, I 'll carry it. I 'll put some coal on the fire to have it all right for father."

Casper pulled open the stove door as he spoke, and the glow of the fire filled the room with a pleasant red light that shone among the glass jars and bottles, making them all sparkle.

"Casper," said Winnie, suddenly, "when I came up through Mrs. Bent's garden I heard the butcher's dog moving behind the woodpile."

"What makes you think it was the butcher's dog?" asked Casper, as he threw a shovelful of coals on the fire. "Did you see it? You are a funny girl!"

"No," said Winnie, hesitatingly, "but it sounded dreadfully big. So I think you would better bring the poker or something of that kind out with us."

At that moment, both children heard a loud thump at the door.

"There is Mr. Jenks, now," cried Casper, joyfully, throwing down the shovel, and snatching up the vial.

"Come in, Mr. Jenks," cried Winnie.

But there was no sign of any one through the glass panes that covered the upper half of the door, and Winnie thought this very singular. She whispered, "I don't believe it is Mr. Jenks, after all. Oh, dear!" she cried out, gathering her skirts about her, and clasping the basket containing the mince pie close to her side as the door slowly opened. "It 's the butcher's dog, Casper!"

A great hairy head was thrust slowly around the door, then an immense paw followed.

Winnie and Casper stared in wonder and alarm, for, large as the butcher's dreaded dog always appeared, it had never looked anything like the size it did to-night, as it stood, half in and half out of the doorway, with the reflection of the fire gleaming on its great yellow eyes and shaggy head.

"It is not a dog!" gasped Casper, as he clutched Winnie's arm. "It is Prince, the lion!"

At the sound of his name, Prince—for it was Prince—rubbed himself slowly against the door, exactly as a cat does when she expects a saucer of milk. Then he came quite into the room; and, feeling the pleasant warmth, stretched himself and yawned.

That dreadful yawn—neither of the children ever forgot it—displayed the great beast's immense white fangs and thick, red tongue.

"If you don't want to make a supper for him,"

cried Casper, dragging Winnie after him as he spoke, "follow me."

First he climbed upon the heavy table under the shelves. Winnie stumbled up, too.

The lion gave a kind of a cry between a whine and a roar, and rubbed himself once more against the door, which closed heavily.

"Where shall we go?" cried Winnie, in terror, when she saw what had happened.

"Don't stop to cry, but come on," replied Casper.

"Where?" asked Winnie, looking wildly about.

"Up to the very top shelf," cried Casper, pointing to the row of shelves close to the table.

"Go first," said Winnie, with her eyes fixed on the unwelcome intruder. "Then you can reach down, and give me your hand."

Casper did not waste a moment, but scrambled up the shelves like a monkey.

"Hurry, hurry!" cried he, reaching down impatiently.

"First take the pie," said Winnie.

"Oh, throw it away!" cried Casper, in agony.

"Indeed I will not," replied Winnie, decidedly, as she forced the basket into his hand.

Casper seized it, and flung it on the shelf.

Prince, at that moment, gave a low, impatient cry, and made a movement toward the table.

Winnie never knew how she performed the feat, but, in an instant more, she was safely seated upon the upper shelf, among the glass jars, with her feet tucked under her, watching the lion's restless movements.

Prince wandered backward and forward, lashing his tail, and glancing up toward the children at every turn.

He did not look so good and mild then as Winnie had remembered, though Prince really was a mild lion, as lions go.

After a while, when Casper and Winnie found that the lion could not reach them, they grew calmer, and began to speak in whispers.

"What I am afraid of," said Casper, glancing anxiously at the door, "is that some one will try to come in, and that Prince will spring at them."

"Oh!" cried Winnie, with a sob, "suppose mother should?"

"She will not be home for ever so long, you know," said Casper, in a trembling tone.

"Look," cried Winnie, grasping Casper's arm and pointing to the door, "who is that?"

"Poor old Mr. Jenks," whispered Casper.

Fortunately, at that moment, Prince took it into his head to squat down, with his back directly against the door.

Mr. Jenks turned the knob, but the door would not budge an inch.

Casper and Winnie screamed, "Go away! go away!" but, as Mr. Jenks was very hard of hearing, he did not notice the warning, but began to look in around the room. He looked everywhere except directly beneath the window, and upon the upper shelf. So he saw only an empty room, with the firelight shining pleasantly over the walls and floor. After trying the door once more, with a disappointed glance backward he disappeared from view.

"Poor man," said Winnie, pityingly, "he will stay awake all night again, I am afraid. What did you do with the medicine, Casper?"

"It is here," replied Casper, thoughtfully, pointing to the vial, which he had unconsciously held fast in his hand.

After a few moments Prince began to grow restless again. He roamed about the room several times, then he stood with his fore paws upon the table, and "mewed" up at them, until Winnie hid her head in her hands, and trembled all over.

"He must be very hungry," she whispered, as she looked out between her fingers. "He cannot have been fed since the fire. I wonder if he would eat my pie." She drew the basket toward her as she spoke.

"Stop," whispered Casper, suddenly, "I am thinking of something. If Prince would only go to sleep we might climb down, run out, and lock him in—don't you see?"

"If," repeated Winnie.

"Well, see here," said Casper, still in a low voice, as though he thought the lion might hear his plan. "It says, on Mr. Jenks's bottle, 'Ten drops on retiring.' Now, if ten drops will make Mr. Jenks sleep, this whole big bottleful ought to make a lion go fast asleep in a short time."

"But how are you going to make him drink it?" asked Winnie, wonderingly.

"Give me your pie," replied Casper. "You say it has meat in it. Prince will eat it, as he is so hungry—don't you see?"

Winnie saw. She handed him the basket. Casper lifted out the pie, and, breaking a hole in the upper crust, poured the contents of the vial into it. Then he dropped the pie down upon the floor.

Prince, after one or two dissatisfied growls which made Winnie's heart beat very fast, began to consider, with various sniffs, the mince pie. He ended, much to Casper's delight, in eating every morsel, and lapping the floor around where it had fallen. Then he sat down, and fixed his eyes on the children, as though he expected something more.

"Oh! he has not had half enough," sobbed Winnie, in despair.

"Wait," said Casper, hopefully, "I think he looks a little sleepy."

Crouching near the ceiling, the children watched their jailer anxiously; but for a long, long time they could not see that Mr. Jenks's medicine had any effect on him. But, after a time, his great staring eyes seemed to lose some of their fire; presently his head drooped a little, and after a while he began to move unsteadily toward the stove. Finally, he flung himself down before it, and became perfectly quiet, stretched out comfortably in the red heat. Just as the lion appeared to have fallen into a heavy sleep, the children heard a sound at the door, and saw that Mr. Jenks had returned. He opened the door a little way, caught sight of the lion lying upon the floor, took off his glasses, rubbed them several times, and came a little nearer. Winnie was about to scream, to warn the old man of his danger; but Casper placed his hand over her mouth, and whispered in her ear, "Take care, you will awake Prince. Then we cannot try to go, you know."

After a long, puzzled, and horrified look, Mr. Jenks hastily retreated. In doing so he dropped the heavy cane he carried, and it fell to the floor with a loud noise; and at that Prince at once raised his head, and staggered to his feet with a loud yawn. Casper settled back—it would not do to try to descend.

Poor old Mr. Jenks stumbled through the door, closed it after him, and turned the key, which was on the outside, and the children heard him go hurriedly down the path.

Meanwhile, Prince settled back to his old position, and again became quiet. Winnie and Casper watched him for many minutes before they ventured to attempt the climb down. But at last Casper put his feet upon the under shelf, and—alas! in doing so he displaced a glass jar and it fell crashing to the floor; and, again disturbed, Prince gave another cross, prolonged whine.

"There is no use," whispered Winnie, "even if you could get down without awaking him—don't you remember that Mr. Jenks locked the door?"

"Oh, dear," replied Casper, as the tears sprang to his eyes, "we must wait until some one else comes."

The fire grew low, and black shadows crept into the room, until it was so dark that they could see nothing but the monster's tawny mane and great paws, upon which a streak of light from the stove still lingered. The children were growing very hopeless and tired, when, suddenly, a noise arose in the garden adjoining—the sound of wheels, tramping feet, and loud voices; presently, lights flashed in through the window, numbers of faces were pressed against the glass; then, after a moment, the door was unlocked very cautiously, and the two trembling children saw the lion's keeper come slowly in. He held in his hand a thick, short whip and a great muzzle; a collar and chain hung clanking over his arm. He advanced on tiptoe, cautiously came near, but Prince did not move.

"Bring in the cage," called the keeper, "there is no danger,—he 's dead, I think."

At that moment Winnie heard her father's voice in the garden, crying, "Where are my children? are my children there? My children are not in the house!"

The crowd of people, consisting of almost all the inhabitants of Mount Morgan, with old Mr. Jenks at their head, now began to force their way into the laboratory.

"If the children were in here," cried one, in a voice of horror, pointing to the lion, "he has eaten them!"

A dozen voices cried out at once, in every tone of terror and horror.

The keeper looked around the room, and shook his head. The chemist himself stood in the door, white and dumb, as if dead. Winnie tried to call out to him, but could not, and Casper pulled her back, and whispered, "I am so ashamed to be seen up here, don't you know? *don't* speak."

But at sight of her father with such a dreadful expression, she could not keep still, even for Casper's sake. Her voice broke free, and, reaching down, she called out, "Papa! here we are!"

Every one in the room sprang forward, and there was a general shout of joy.

Winnie was helped down from her high perch, Casper clambering after, and was so surrounded, and so many questions asked of her, that she grew bewildered, and looked round for Casper to speak; but he had disappeared, evidently disgusted with himself for not having displayed all the courage and skill of a professional lion-tamer.

Presently the keeper came to her.

"Little girl, will you try and tell me if this lion looked sick when you first saw him?"

"No," replied Winnie, faintly, "only hungry."

"Then I wonder what is the matter with him?" said the keeper.

"He ate my pie," replied Winnie.

"Then your pie must have been an awful indigestible one," replied the keeper, looking still more puzzled.

"No, it was not," said Winnie, now lifting her head, indignantly. "It was a very nice pie. It was Mr. Jenks's medicine that Casper put in the pie that made Prince go to sleep."

"Mr. Jenks's medicine!" exclaimed her father.

"My medicine?" cried Mr. Jenks, looking angrily at the lion.

"Yes," said Winnie, "we wanted to get down, you know."

Every one in the room now laughed aloud—all but the keeper, who looked rather anxiously at the sleeping lion. "Will it kill him, do you think?" he asked, turning to the chemist.

"Oh, no!" said Doctor Graham, "but they have given him enough to make ten lions sleep several hours."

After this explanation the lion was fearlessly laid hold upon by the men, and dragged off and put into the cage upon wheels, which had been brought to the door by the keeper—a very sound asleep lion, indeed.

Then every one went home.

As soon as he recovered from the effects of Mr. Jenks's medicine, Prince became so notorious that he was visited even more than ever, and was still more "good and mild"; but nothing could persuade Winnie to go near the new menagerie, though the keeper complimented both her and Casper with season tickets; and, although she is an old woman now, she has never looked upon a lion since that evening in her father's laboratory—nor has she tasted of a mince pie.

TARTARIN OF TARASCON

Adapted from Alphonse Daudet

I REMEMBER my first visit to Tartarin of Tarascon as clearly as if it had been yesterday, though it is now more than a dozen years ago. He then lived in the third house on the left as you enter the town on the Avignon road. It was a pretty little villa, like many others in Tarascon, with a delightful little garden plot in front, a balcony behind, and its walls so whitely painted that they glittered like a mirror in the bright southern sunshine. The Venetian shutters were of bright green; but really there was nothing remarkable about the outside of the house. Inside, it was a very different story.

When you had passed into the garden at the back, you would never have fancied you were in old France. Every tree and plant had been brought from foreign lands; he was such a tremendous fellow for collecting the curiosities of Nature, this wonderful Tartarin. His garden boasted, for instance, an example of the baobab-tree, the most gigantic of all trees in the world, but Tartarin's specimen was only big enough to occupy a mignonette pot. He was mightily proud of it, all the same.

The great sight of his place, however, was the hero's private den at the bottom of the garden. Picture to yourself a large hall gleaming from top to bottom with firearms and weapons of all sorts, gathered from every clime: carbines, rifles, blunderbusses, bowie-knives, revolvers, daggers, flint-arrows—in a word, examples of the deadly weapons of all races, used by man in all parts of the world. Everything was wonderfully and neatly arranged, and labeled as if it were in a public museum. "Poisoned Arrows. Please do not touch!" was the warning on one of the cards. "Weapons loaded. Have a care!" greeted you from another. My word, it required some pluck to move about in the den of the great Tartarin.

There were books of travel and adventure, books about mighty hunting, on the table in the center of the room, and seated at the table was a short and rather fat, red-haired fellow of about forty-five years, with a closely trimmed beard and a pair of bright eyes. He was in his shirt-sleeves. He was reading a book held in one hand while he gesticulated wildly with a large pipe held in the other. He was evidently imagining himself the daring hero of the story. This jolly-looking fellow was the great Tartarin of Tarascon, the intrepid, the incomparable Tartarin!

Now, at the time of which I speak, Tartarin had not risen to the great fame of his later years. He was certainly a man of note in Tarascon, but he had still to become the most famous man in all the south of France. The people of Tarascon were tremendously keen on hunting, and Tartarin was the chief of the hunters. You may think this funny when you know there was not a living thing to shoot at within miles of Tarascon; scarcely a sparrow to attract local sportsmen. Ah, but you don't know how ingenious they are down there.

A DAY WITH THE GALLANT "CAP-HUNTERS" OF TARASCON

EVERY Sunday morning off the huntsmen sallied with their guns and ammunition, the hounds yelping at their heels. In the evening they came back well satisfied with their day's sport. And

this is how they made up for the lack of game. Each man as he left in the morning took with him a brand-new cap, and when they got well into the country and were ready for sport, they took their caps off, threw them high in the air, and shot at them as they fell. In the evening you would see them returning with their riddled caps stuck on the points of their guns, and of all these brave men Tartarin was the most admired, as he always swung into town with the most hopeless rag of a cap at the end of a day's sport.

There was nothing about wild beasts and hunting that Tartarin had not read, and there was absolutely nothing about them that he knew from actual experience. But it was enough for his friends of Tarascon that he was king of the cap-shooters, and you could see him any night sitting in the shop of Costecalde, the gunsmith, giving forth his opinions on the chase to an admiring audience of fellow-townsmen.

TARTARIN AS A MUSICIAN, AND THE FUNNY DUET

The people of Tarascon, in addition to this strange craze for the chase, are great lovers of sentimental songs, as we might expect from descendants of the old troubadours. Every family has its own favorite song. Bezuquet, the chemist, for instance, pins his faith to that beginning: "Oh, thou fair star, whom I adore!" Tartarin also fancied he could sing, but his vigorous bellowing was enough to make the old troubadours turn in their graves. Madame Bezuquet would induce him to take part in a duet in which all he had to do was to sing "No, no, no!" every few lines, and this he did with such superfluous energy that he had to wipe the perspiration from his face at the end of it. Feeling quite happy, however, he would drop into his club later on and say in an offhand way:

"I have just come from the Bezuquets', where they would have me sing in the duet from 'Robert le Diable.'" But the funniest part of it was he really believed he had been singing in a duet.

You can readily see how such a good-natured fellow was popular with everybody. All the soldiers quartered in Tarascon were for Tartarin to a man. The legal authorities and the common people equally admired his noble swagger. Surely there never was such a tremendous fellow, and yet withal he was not happy. He felt that he was capable of greater achievements than he had scope for in Tarascon.

His imagination had been so fired by reading the stories of brigands and pirates and red Indians, to say nothing of big-game hunting, that he had come to be continually on the lookout for adventure, even when he walked about his own little town.

HOW THE GREAT MAN THIRSTED FOR SOME EXCITING ADVENTURE

Before leaving his villa to proceed to his club, he used regularly to practise with swords and pistols, so that he might be prepared if "they"—which stands for pirates, brigands, or anything of that sort—should attack him. He even chose the longest and darkest road to his club to prove how fearless he was, how little he cared for danger. But every night it was the same; after looking all the way and lingering outside the door in the hope of some adventure, he would at last go into his club murmuring: "Nothing! Nothing! Always nothing!" and spend the evening playing cards.

Despite all his thirst for travel and adventure, Tartarin had never been farther than Beaucaire. Beaucaire is not very far from Tarascon. It is a town on the other side of the river Rhône, and it is connected with Tarascon by means of a bridge. But the bridge had often been swept away by storms, and in Tartarin's time it was so long and so rickety that—zounds! well, you understand. . . . Tartarin preferred to have a grip of the ground. You see, for all his adventurous spirit, he had a certain amount of caution. There were really two men in Tartarin. The one Tartarin said to him: "Cover yourself with glory." The other Tartarin said to him: "Cover yourself with flannel." The one Tartarin, imagining himself fighting the red Indians, would call for "An axe! An axe! Somebody give me an axe!" The other Tartarin, knowing that he was cozy by his fireside, would ring the bell and say: "Jane, my coffee." Tartarin was really Don Quixote and Sancho Panza rolled into one. And that is why he had not yet ventured away from Tarascon.

TARTARIN'S IMAGINARY VOYAGE TO THE FAR EAST

Once, however, he just missed going on a great voyage to Shanghai. In fact, he nearly went, and people talked so much about his intention to go that after a time it seemed as if he had been, and he himself began to believe he had actually been at Shanghai. People in fun would ask him what life was like out there, and he would tell them quite frankly, describing the raids of the Tartars.

"Then I put my men under arms," Tartarin would explain for the hundredth time, "ran up

the consular flag, and—slap! bang! from the windows on the Tartars."

Really, you may think that Tartarin told lies, but it was not so. The fact is, the sun is so strong in the south of France, and particularly at Tarascon, that it seems to magnify everything, and raises in the minds of the imaginative people visions of things they would like to do, and have never done, but in time begin to believe they have done.

THE COMING OF THE LION TO TARASCON AND WHAT IT LED TO

But a time was to come at last when Tartarin was to find adventure. One evening at the gunsmith's, when the hero was explaining some mechanism of the rifle, the door was opened and an excited voice announced: "A lion! A lion!" The news seemed incredible, but you can imagine the terror that seized the little group in the gunsmith's, as they asked for more news. It appeared that the lion was to be seen in a traveling menagerie that had arrived from Beaucaire. Never had such a thing been known in Tarascon, and Tartarin's fellow cap-hunters began to think they had here an opportunity.

The great man himself was lost in thought. A lion at last, and here in Tarascon! Suddenly, when the full truth had dawned upon him, he shouldered his gun, and, turning to Major Bravida, "Let us go to see him!" he thundered. Following him went the cap-hunters. Arrived at the menagerie, where many Tarasconians were already wandering from cage to cage, Tartarin entered with his rifle over his shoulder to make inquiries about the king of beasts. His entrance was rather a wet blanket to the spirits of the other visitors, who, seeing their hero thus armed, thought there might be danger, and were about to flee. But the proud bearing of the great man reassured them, and Tartarin continued his round of the booth until he faced the lion from the Atlas Mountains.

Here he stood carefully studying the creature, who sniffed and growled in surly temper, and then, rising, shook his mane and gave vent to a terrible roar, directed full at Tartarin. At this, most of the visitors made a rush for the door, women screaming, children tumbling over each other. Even the brave Bravida made a move away.

TARTARIN FACES THE KING OF BEASTS AND MAKES A MEMORABLE REMARK

Tartarin alone stood his ground, stern and immovable, in front of the cage, and the valiant cap-hunters, somewhat reassured by the bravery of their leader, again drew near and heard him murmur, as he gazed on the lion: "Ah, yes, there 's a hunt for you!"

Not another word did Tartarin utter that day. Yet next day nothing was spoken about in the town but his intention to be off to Algeria to hunt the lions of the Atlas Mountains. When asked if this were true, his pride did not let him deny it, and he pretended that it might be true. So the notion grew, until that night at his club Tartarin announced, amid tremendous cheering, that he was sick of cap-hunting, and meant very soon to set forth in pursuit of the lions of the Atlas.

Now began a great struggle between the two Tartarins already described. While the one was strongly in favor of the adventure, the other was strongly opposed to leaving his snug little house and the safety of Tarascon. But he had let himself in for this, and felt he would have to do it. So he began reading up the books of African travel, and found from these how some of the explorers had trained themselves for the work by enduring hunger, thirst, and other privations before they set out. Tartarin began cutting down his food, taking very watery soup. Early in the morning, too, he walked round the town seven or eight times, and at nights he would stay in the garden from ten till eleven o'clock, alone with his gun, to inure himself to night chills; while so long as the menagerie remained in Tarascon a strange figure might have been seen in the dark prowling around the tent, listening to the growling of the lion. This was Tartarin, accustoming himself to be calm when the king of beasts was raging.

There had never been such a time in Tarascon as the period of preparation for Tartarin's great journey. It was the sole subject of conversation; everybody talked about the hero, and what he might do, and whether he would really go, or if it were only to be another visit to Shanghai!

THE HERO GROWS FAINT-HEARTED, BUT IS URGED TO HIS GREAT TASK

The feeling began to grow that the Tartarin who believed in covering himself with flannel was going to get the upper hand of the Tartarin who wanted to cover himself with glory. The hero was clearly shirking. He showed no haste to be off. The soldiers were the only people in the town who still believed in him, and one night Major Bravida went to Baobab Villa and said very solemnly: "Tartarin, you must go!"

It was a terrible moment for Tartarin, but he realized the solemnity of the words, and, looking around his cozy little den with a moist eye, he replied at length, in a choking voice: "Bravida, I

shall go!" Having made this final decision, he now pushed ahead his final preparations with some show of haste. From Bompard's he had two large trunks, one inscribed with "Tartarin of Tarascon. Case of Arms." From Bezuquet he bought a portable medicine-chest, and he sent to Marseilles for all sorts of provisions of travel, including a patent camp-tent of the latest style.

Then the great day of his departure arrived. All the town was agog. The neighborhood of Baobab House was crammed with spectators. About ten o'clock the bold hero issued forth.

"He 's a Turk! He 's wearing spectacles!" This was the astonished cry of the beholders, and it was true, for Tartarin had thought it his duty to don Algerian costume because he was going to Algeria. He also carried two heavy rifles, one on each shoulder, a huge hunting-knife at his waist, and a revolver in a leather case. A pair of large blue spectacles were worn by him, for the sun in Algeria is terribly strong.

THE DEPARTURE FOR THE GREAT LION-HUNTING EXPEDITION

Making his way through the crowd, accompanied by some of his most valiant friends, he reached the railway station and ascended the many steps which lead up to the platform from the road below. The doors of the waiting-room had to be closed to keep the crowd out while the great man took leave of his friends, making promises to each, and jotting down notes on his tablets of the various people to whom he would send lion-skins. Then the train came in, and had almost left again before the strangely dressed hero had time to jump into a carriage full of Parisian ladies, whom he nearly frightened to death with his rifles and other deadly weapons.

The wonderful town of Marseilles was less surprised at the grotesque figure of Tartarin, with his guns over his shoulders, than he was at the town. The mistral, the great wind that blows along the Mediterranean, was in full vigor when he embarked for the land of the lions, and he thought it a happy augury, as though the spirits of the air were trumpeting a triumphant farewell to the hero of France.

HOW TARTARIN BEHAVED ON HIS VOYAGE ACROSS THE MEDITERRANEAN

Oh that I had the brush of an artist, that I might paint you some pictures of Tartarin of Tarascon during his three days aboard the "Zouave" on the voyage to Algeria! But I have no facility with the brush, and mere words cannot convey how Tartarin passed from the proudly heroic to the hopelessly miserable in the course of the journey. Worst of all, when lying in his bunk, robbed of all his glory by seasickness, he had to listen to Tartarin of the flannel saying to Tartarin of the glory:

"This serves you right, you silly old chap! Did n't I tell you what it would be? But you would go to Africa! Oh, yes, you would go hunting lions! Now here you are, and how do you like it?"

Still worse was it for him to know, while he was groaning in his stuffy bunk, that a very merry party of passengers were enjoying themselves in the saloon. He was still in his bunk when the ship came to her moorings at Algiers, and he got up with a sudden jerk, under the impression that the "Zouave" was sinking. Seizing his many weapons, he rushed on board, to find it was not foundering, but only arriving.

THE LION-HUNTER'S LITTLE MISTAKE ABOUT THE ALGERIAN PIRATES

Under the bluest of blue skies lay Algiers the Fair, formerly the haunt of pirates, and still infested with the most desperate sea-rovers, to the heated imagination of Tartarin, who shouted: "To arms!" when the villainous-looking porters boarded the vessel, as he thought they were the pirates. Soon after Tartarin had set foot on shore, following a great negro porter, he was almost stupefied by the babel of tongues; but, fortunately, a policeman took him in hand and had him directed, together with his enormous collection of luggage, to the European Hotel. What surprised him most about the town, which he expected would be a real Arabian Nights' city, was to find it just like Tarascon, with its cafés and its restaurants and French names everywhere.

On arriving at his hotel, he was so fatigued that his marvelous collection of weapons had to be taken from him, and he had to be carried to bed, where he snored very soundly until it was striking three o'clock. He had slept all the evening, through the night and morning, and well into the next afternoon!

TARTARIN IN LION-LAND AT LAST, AND HIS FIRST EXPLOIT

He awakened refreshed, and the first thought in his mind was: "I 'm in Lion-land at last!" But he thought of this with a cold shiver, and dived under the bedclothes. A moment later he determined to be up. Exclaiming, "Now for the

lions!" he jumped on the floor and began his preparations.

His plan was to get out at once into the country, take ambush for the night, shoot the first lion that came along, and then back to the hotel for breakfast. So he went off, carrying not only his usual arsenal, but the marvelous patent tent strapped to his back. He attracted no little attention as he trudged along, and catching sight of a very fine camel, his heart beat fast, for he thought the lions could not be far off now.

It was quite dark by the time he had got only a little way beyond the outskirts of the town, scrambling over ditches and bramble-hedges. After much hard work of this kind, the mighty hunter suddenly stopped, whispering to himself: "I seem to smell a lion hereabouts." He sniffed keenly in all directions. To his excited imagination, it seemed a likely place for a lion; so, dropping on one knee, and laying one of his guns in front of him, he waited.

He waited very patiently. One hour, two hours; but nothing stirred. Then he suddenly remembered that great lion-hunters take a little young goat with them to attract the lion by its bleating. Having forgotten to supply himself with one, Tartarin conceived the happy idea of bleating like a goat. He started softly, calling: "Meh, meh!" He was really afraid that a lion might hear him, but as no lion seemed to be paying attention he became bolder in his "mehs," till the noise he made was like the roar of a bull.

THE GREAT ADVENTURE IN A SUBURBAN KITCHEN GARDEN

But hush! What was that? A huge black object had for the moment loomed up against the dark blue sky. It stooped, sniffing the ground; then seemed to move away again, only to return suddenly. It must be the lion at last; so, taking a steady aim, bang went the gun of Tartarin, and a terrible howling came in response. Clearly his shot had told; the wounded lion had made off. He would now wait for the female to appear, as his books had taught him.

But two or more hours passed, and she did not come; and the ground was damp, and the night air cold, so the hunter thought he would camp for the night. After much struggling, he could not get his patent tent to open. Finally, he threw it on the ground in a rage and lay on the top of it. Thus he slept until the bugles in the barracks near by wakened him in the morning. For, behold, instead of finding himself out on the Sahara, he was in the kitchen garden of some suburban Algerian!

"These people are mad," he growled to himself, "to plant their artichokes where lions are roaming about. Surely I have not been dreaming. Lions do come here; there 's proof positive."

From artichoke to artichoke, from field to field, he followed the thin trail of blood, and came at length to a poor little donkey he had wounded!

Tartarin's first feeling was one of vexation. There is such a difference between a lion and an ass, and the poor little creature looked so innocent. The great hunter knelt down and tried to stanch the donkey's wounds, and it seemed grateful to him, for it feebly flapped its long ears two or three times before it lay still for ever.

Suddenly a voice was heard calling: "Noiraud! Noiraud!" It was "the female." She came in the form of an old French woman with a large red umbrella, and it would have been better for Tartarin to have faced a female lion than this very angry old lady.

TARTARIN "GOES SOUTH" AFTER MISTAKING A DONKEY FOR A LION

When the unhappy man tried to explain how he had mistaken her little donkey for a lion, she thought he was making fun of her, and belabored him with her umbrella. When her husband came on the scene, the matter was soon adjusted by Tartarin agreeing to pay eight pounds for the damage he had done, the price of the donkey being really something like eight shillings. The donkey-owner was the innkeeper, and the sight of Tartarin's money made him quite friendly, so that he invited the lion-hunter to have some food at the inn with him before he left. And as they walked thither he was amazed to be told by the innkeeper that he had never seen a lion there in twenty years!

Clearly, the lions were to be looked for farther south. "I 'll make tracks for the south, too," said Tartarin to himself. But he first of all returned to his hotel in an omnibus. Think of it! This distinguished hunter, dressed like a Turk, with his guns, revolvers, and knives, to say nothing of his tent, going back to town on the top of an omnibus! But before he was to go south on the high adventure, he loafed about the city of Algiers for some time, going to the theaters and other places of amusement, where he met Prince Gregory of Montenegro, with whom he made friends. The fact was, poor old Tartarin had been stricken with love for one of the veiled Moorish women of Algiers, whom he had first seen on the omnibus, and he was hanging about the town in the hope of meeting her again. The prince kindly undertook to find her for him.

IN LOVE WITH A MOORISH LADY AND FRIENDS WITH A PRINCE

VERY soon he pretended he had found her, and all would be well if Tartarin would write a letter to her, which the prince would deliver. Meanwhile, he had to buy an enormous number of pipes to send her, as he was told she was a great smoker, like all Moorish ladies.

At last, a meeting was arranged, and the prince accompanied Tartarin to the house of the lady, who received him sitting on her divan in true oriental fashion, smoking her hookah. Tartarin was greatly delighted to meet the lady. She entertained him by dancing and playing on the guitar. Still, he doubted whether she really was the unknown fair one of the omnibus. He was so delighted to visit her that he might never have gone southward after the lions had not the captain of the "Zouave" come across him in Algiers one day, and hinted that the prince and the lady were making a fool of him. Besides, Tartarin happened to read a note from Tarascon in a newspaper which the captain had, and there it spoke of the uncertainty that prevailed as to the fate of the great hunter, winding up with this paragraph:

"Some negro traders state, however, that they met in the open desert a European whose description answers to that of Tartarin, and who was making tracks for Timbuctoo. May Heaven guard for us our hero!"

THE FIRST LION THAT TARTARIN MET IN ALGERIA

TARTARIN went red and white by turns as he read this, and realized that he was in for it. He very much wished to return to his beloved Tarascon, but to go there without having shot some lions—one at least—was impossible, and so it was Southward ho!

He was keenly disappointed, after a very long journey in the stage-coach, to be told that there was not a lion left in all Algeria, though a few panthers might still be found worth shooting.

He got out at the town of Milianah, and let the coach go on, as he thought he might as well take things easily if, after all, there were no lions to be shot. But, to his amazement, he came across a real live lion at the door of a café.

"What made them say there were no more lions?" he cried, astounded at the sight. The lion lifted in its huge mouth a wooden bowl from the pavement, and a passing Arab threw a copper into the bowl, at which the lion wagged its tail. Suddenly the truth occurred to Tartarin. Here was a poor, blind, tame lion, which a couple of negroes were taking through the streets, just like a performing dog. His blood was up at the very idea. Shouting, "You scoundrels, to humiliate these noble beasts so!" he rushed and took the degrading bowl from the royal jaws of the lion. This led to a quarrel with the negroes, at the height of which Prince Gregory of Montenegro came upon the scene.

TARTARIN AS A CAMEL-RIDER IS NOT A SUCCESS

THE prince told him a most untrue story about a convent in the north of Africa where lions were kept to be sent out with priests to beg for money. He also assured him that there were lots of lions in Algeria, and that he would join him in his hunt.

Thus it was in the company of Prince Gregory, and with a following of half a dozen negro porters, that Tartarin set off early next morning for the Shereef Plain; but they very soon had trouble, both with the porters and with the provisions Tartarin had brought for his great journey. The prince suggested dismissing the negroes and buying a couple of donkeys, but Tartarin could not bear the thought of donkeys, for a reason with which we are acquainted. He readily agreed, however, to the purchase of a camel, and when he was safely helped up on its hump, he sorely wished the people of Tarascon could see him. But his pride speedily had a fall, for he found the movement of the camel worse than that of the boat in crossing the Mediterranean. For the remainder of their expedition, which lasted nearly a month, Tartarin preferred to walk on foot and lead the camel.

From village to village they went, the prince always telling Tartarin wonderful stories of the lions that might be met, but never a sign of a lion was seen. One night, in the desert, however, Tartarin was sure he heard sounds just like those he had studied at the back of the traveling menagerie at Tarascon. He was positive they were in the neighborhood of a lion at last. He prepared to go forward to stalk the beast. The prince offered to accompany him, but Tartarin resolutely refused. He would meet the king of beasts alone!

THE HERO GOES FORTH ALONE TO SLAY THE ROARING LION

HE intrusted his pocket-book, full of precious documents and bank-notes, to the prince, in case

he might lose it in a tussle with the lion, and so moved forward. His teeth were chattering in his head, and his rifle was rattling on the hilt of his hunting-knife, when he lay down, trembling, to await the lion.

It must have been two hours before he was sure that the beast was moving quite near him in the dry bed of a river. Firing two shots into the darkness in the direction whence the sound came, he got up and bolted back to where he had left the camel and the prince—but there was only the camel there now! The prince had waited a whole month for this chance to make off with Tartarin's money.

In the morning the truth dawned slowly upon him that he had been robbed by a thief who pretended to be a prince. And here he was in the heart of savage Africa with a little pocket-money only, much useless luggage, a camel, and not a single lion-skin to show for all his trouble.

Sitting on one of the desert-tombs erected over pious Mohammedans, the great man began to weep bitterly. But even as he wept the bushes were pushed aside a little in front of him, and a huge lion presented itself.

A LION AT LAST, AND HOW TARTARIN NEARLY BLEW IT TO PIECES

It advanced toward him, howling terribly. To his honor be it said, Tartarin never moved a muscle, but, breathing a fervent "At last!" he leaped to his feet, and, leveling his rifle, planted two explosive bullets in the lion's head. All was over in a moment, for he had nearly blown the king of beasts to pieces! But in another moment he saw two tall, enraged negroes bearing down upon him with their cudgels. He had seen them before at Milianah, and this was their poor, blind lion! Fortunately for Tartarin, he was not so deeply in the desert as he had thought, but was merely outside the town of Orleansville, and a policeman from that place now came up, attracted by the firing, and took full particulars.

The upshot of it was that he had to suffer much delay in Orleansville, and was eventually fined one hundred pounds. How to pay this was a problem which he solved by selling his weapons and all his extensive outfit, bit by bit, to different buyers. When his debts were paid, he had nothing but the lion's skin and the camel. The former he despatched to Major Bravida at Tarascon, and the camel he meant to sell in order to pay his coach fare back to Algiers. But nobody would buy the creature, and its master had to face all the journey in short stages on foot.

THE AFFECTIONATE CAMEL THAT STOOD BY ITS MASTER

The camel showed a curious affection for him, and followed him as faithfully as a dog. When, at the end of eight days' weary tramping, he came at last to Algiers, he did all he could to lose the animal, and hoped he had succeeded. He met the captain of the "Zouave," who told him that all Algiers had been laughing at the story of how he had killed the blind lion, and he offered Tartarin a free passage home.

The "Zouave" was getting up steam next day, as the dejected Tartarin, no longer the owner of splendid weapons, or needing portage for his luggage, but so destitute that his hands were all he had in his pockets, had just stepped into the captain's long-boat, when, lo! his faithful camel, which had been hunting for him for the last twenty-four hours, came tearing down to the quay and gazed affectionately at its friend. Tartarin pretended not to notice it; but the animal seemed to implore him with its eyes to be taken away. "You are the last Turk," it seemed to say, "I am the last camel. Let us never part again, O my Tartarin!"

But the lion-hunter pretended to know nothing of this ship of the desert.

As the boat pulled off to the "Zouave," the camel jumped into the water and swam after it, and was taken aboard. Tartarin spent the return voyage in his state-room, not because of the rough weather this time, but because he could not venture on deck without being worried by the camel. At last, however, our hero had the joy of hearing the "Zouave" cast anchor at Marseilles, and, having no luggage to trouble him, he rushed off the boat at once and hastened to the railway station, hoping to get ahead of the camel.

HOW THE CAMEL HELD ITS OWN WITH THE TRAIN AND GOT TO TARASCON

He booked third class, and quickly hid himself in a carriage. Off went the train. All was well, he thought. But the train had not gone far when everybody was looking out of the windows and laughing. Behind the train ran the camel—he was holding his own, too!

What a humiliating home-coming! All his weapons of the chase left on Moorish soil, not a lion with him, nothing but a stupid camel!

"Tarascon! Tarascon!" shout the porters as the train slows up at the station, and our hero gets out. He had hoped to slink home unobserved; but, to his amazement, he is received with shouts of "Long live Tartarin!" "Three cheers

for the lion-slayer!" The people are waving their caps in the air; it is no joke, they are serious. There is the brave Major Bravida, and there are the more noteworthy cap-hunters, who cluster round their chief and carry him in triumph down the stairs.

THE HAPPY RESULT OF SENDING HOME A LION'S SKIN

Now, all this was the result of sending home the skin of the blind lion. Is n't it wonderful what a skin can do for one? But the climax was reached when, following the crowd down the stairs of the station, limping from his long run, came the camel. Even this Tartarin was happily able to turn to good account. He reassured his fellow-citizens, patting the camel's hump:

"This is my camel; a noble beast! It has seen me kill all my lions."

And so, linking his arm with the worthy major, he calmly wended his way to Baobab House, amid the ringing cheers of the populace. On the road he began a recital of his great hunts.

"Picture to yourself," he said, "a certain evening in the open Sahara——"

BY WALTER STORRS BIGELOW

I. "KA-SOUZE! KA-SOUZE!"

On summer vacation afternoons, we used to meet in my uncle's side yard; and the low front fence, made of short posts connected by smooth, white beams six inches square, sagged beneath a row of boys enjoying the shade of full-leaved maple-trees that lined the street. Those fence-beams were not set in cornerwise, presenting a sharp edge to sit on, but were thoughtfully placed sidewise, and thus made a most inviting seat.

After two hours of standing and sitting and

lying around, such as only boys are capable of, while waiting till the July sun had slid well down the west, we adjourned with one accord, yet at no perceptible signal, like a flock of birds rising out of the grass together, to the "swimming-hole." In groups of three and four, a dozen or more of us, we loitered down the shady sidewalk to a certain gate. This gate we vaulted (by preference, for it opened easily), and strolled along a green lane to its end. There, before climbing the rail fence at this point, we often paused a moment, like the young epicures we were, to look at a tree of little red apples from which we would help ourselves on our return, hungry from the bath.

One wide meadow lay between the fence and the swimming-hole, which was a place in the stream worn deep at one side by the current, though it was shallow at the other side. At this spot a great tree grew out over the water. The older boys would dive in above this tree, and as they came up, seize its lower boughs, climb like young monkeys to the trunk, and walk down it to the ground.

Through the meadow, half-way between the rail fence I spoke of and the swimming-hole, ran a little brook. The direct way over this brook was at a point where it was about three feet deep. Here a young tree, perhaps eight inches in diameter, torn up by some high wind, had been laid across with its branching roots on the side toward the swimming-hole. Not far down, the brook became suddenly shallow and was forded on stepping-stones.

At this place the line was sharply drawn between the little boys and the big boys. The big boys walked the tree-bridge, but the little boys hopped across on the stepping-stones. Since to be considered a little boy was a disgrace, fear alone prevented those who did not walk the tree. One fatal day I determined to bear the stigma, "little boy," no longer. I spoke to no one of my resolution, but when we reached the brook that afternoon, I waited until several of the larger boys had crossed, and then started boldly over on the tree.

Distracting yells and cries of, "You 're in; you 're in!" arose from both banks, but I kept discreetly silent, and stepped bravely on. As I neared the other side I firmly grasped one of the projecting roots of the tree on which I stood, and now, thinking myself safe, as I heard once more the cry, "You 're in; you 're in!" exultingly replied, "*Am* I?" But just then the root acted like a lever in my hand, and turned the trunk beneath my feet. In falling, I whirled completely round, facing the way I had come. When my feet touched bottom, I was off my balance in water breast-high. I stretched out both arms, and in a wild attempt to regain an equilibrium, plunged desperately through the water until I reached the shore whence I had so valiantly set forth, and drew myself out, soaked and heavy, on the bank, looking like a drowned kitten.

I got no nearer the swimming-hole that day. And on many a day after I was treated to a clever mimicry of my performance, and heard from the lips of relentless boys:

" 'You 're in; you 're in!' '*Am* I?' Ka-souze! Ka-souze!"

II. AN UNREWARDED RESCUE

"JUMP in, Frank; you 'll never learn till you try."

Frank was tall for his age, which was about my own. He was awkward and heavy, and declared he never *could* learn to swim. I was a pretty good swimmer for a small boy, taking naturally to the water—though sometimes against my will, as on the day I first tried to cross the brook by means of the tree bridge. Frank was a careless, good-humored boy, not very deep, which perhaps accounted for his preference for shallow water. He looked so ridiculous wading and paddling around with urchins half his size in the riffles above the "hole," that it was no wonder that we laughed at the sight, and finally egged him on to make an attempt to swim.

From the day he first tried it he never waded with the little boys again. But his struggles in deep water were funnier than his paddling in the riffles. He would walk back some distance from the bank, turn and run to the water's edge, leap wildly into the air, and descend, feet first, out of sight with a great splash. In a moment up he would come to the surface spluttering and gasping, and beating the water into foam about him with arms and legs, like the paddles of a patent churn. The current would carry him swiftly under the tree that projected over the stream, and he would clutch the low-hanging boughs like a drowning man, drag himself out upon the trunk, and thence get ashore. He was at no time in danger, for the stream was shallow just below, and had he missed his hold on the tree he would have been stranded in a moment where the water was not a foot deep. Day after day we boys stood on the bank and waited for the "circus" to begin when Frank was ready for his "swim." He came past us on a double-quick, elbows down, features set and eyes starting with determination, and then we witnessed, with shrieks of laughter, that ungainly, sprawling leap. For an instant he hung as if suspended, turned

half over, and then came down like a lead image.

Early one morning Frank, Ed Bristol, and I started out on a fishing-excursion down the creek. We were all appropriately dressed in the oldest clothes that we could still get into; though Frank, having "sprouted" fast, looked more than the rest like a scarecrow, for his gaunt wrist-bones showed below his sleeves, and there was a wide gap between the tops of his shoes and the legs of his trousers. But he was the proud wearer of a new twenty-five-cent straw hat, with very wide brim, which made up for shortcomings elsewhere. We fished till noon along the bank, without much success, I must admit. Then we sat down and transferred to our empty stomachs the lunch we had carried thus far in a basket, and after a little rest kept on down stream.

About the middle of the afternoon we reached a spot unfamiliar to us all. The creek here widened and deepened, and was overhung with willow-trees that cast a delicious shade upon the water. "Let 's go in swimming," suggested Frank. But, in my opinion, Frank's swimming was not so well suited to this place as to one where he would be less dependent on his own skill, and I tried to dissuade him, but in vain. He was determined, and commenced to unlace his shoes at once; so I, who was ready enough for my own part, followed his example. Ed's mother had said he must not go in that day, and like a good boy he stayed on land. This I soon had reason to regret, for he was nearly Frank's size, and I was less than two-thirds as big.

Frank's swimming powers seemed to have increased for the occasion. His plunges were less frantic than before, and when he came up he struck out boldly, and scrambled on the bank with little trouble. To vary the programme, I put on Frank's new broad-brimmed hat, and dived with it. Of course, when I rose it was drawn by the water well down around my head and shoulders, but I swam with one hand and pulled it off with the other. Frank, elated by his own prowess, announced that he would perform the same feat. We both tried to prevent this, and warned him of the danger, but he laughed and said he knew his own business, crowded the hat on tight, and jumped in. I stood on the bank with Ed, and watched anxiously for his reappearance. Soon up he came, impeded, as I had been, by the broad brim of his hat. This confused him, as I had feared, and threw him into a panic, for he could neither see nor breathe. His arms struck out aimlessly, and smothered cries of "Help! help!" came from under that miserable hat.

I felt like a harbor-tug called on to save a sinking ocean steamer. All I had ever heard about the death-grip of a drowning man came into mind; but I jumped in, swam warily around, back of the helpless boy, and seized him under the arms. Kicking out rapidly with all the strength in my short legs, I succeeded in propelling him within reach of Ed, who pulled him out. When I had followed, I chanced to see that hat some distance down the stream, and watched it float slowly out of sight around a bend.

Frank soon recovered, and dressed himself with our assistance. Thus far he had said no word of thanks to me. I had read of youths saving the lives of strange young ladies, who afterward gave their hands, and incidentally their fortunes, to their brave preservers. But this was not a parallel case, and words were all I expected in payment when Frank's senses cleared. Just as we were about to start for home, Frank put his hand to his head, full recollection seemed to dawn on him all at once, and he turned to me. I was ready to stem the tide of thanks by protesting that I had done no more than my duty; but he only exclaimed, *"Where 's my hat?"* I told him where I last had seen it, and he cried: "Why did you let it go? You might have saved it!"

All the way home he grumbled from under the handkerchief tied on his head in place of that lost straw hat.

At last I could stand it no longer, and upbraided him for his ingratitude.

This brought him to his senses, and he said, sheepishly enough, that of course he was much obliged, but he wished I had thought to save the hat, as I might easily have done. However, he said, it was no matter; but he was sorry, as it was such a nice hat, and he got it only yesterday.

III. AN ACROBATIC FAILURE

One afternoon Lou Preston was in the middle of a story when we reached the swimming-hole. He was always telling stories in the slow, drawling tone natural to him, and as the boys listened eagerly, you may be sure they were interested. Boys are no flatterers in word or deed, and if they pay attention it is certain that your story is liked.

What he was telling that day was a little above me, as we say, and while the older boys delayed to hear the last of it, I got ready, wet my head first, "to prevent a rush of blood," according to tradition, and then jumped in.

As I was unnoticed, I took the chance to learn to dive backward. This I did successfully several times, and when Lou's story was finished I had a

new feat to execute for my own glory and the delectation of my friends.

"Look here, boys!" I cried, "look here, Charlie! look here! Aw! wait a minute, and watch me." I got their attention at last, and braced myself for a triumphant exhibition of my great act.

I have described the swimming-hole as a place at one side of the stream, worn deep by the current. Above and below, and at the further side, the water was shallow. The near side of this hole was perpendicular, and the hole was said to be twenty feet deep. This was just the place to dive.

That day, as the stream was high, its rippling surface overflowed the bank, the top of which formed a ledge several inches wide, under water, before the true rim of the hole was reached.

In my successful attempts to dive backward, I had stood on this ledge with my feet under water and my heels at the rim of the hole, and turned a back somersault. But now, having drawn all eyes to me, in my haste to act before their notice was distracted, and in the flurry of a public performance, I set my heels at the margin of the overflowing water, my feet being on dry land, and forgot the ledge hidden by the water between me and the rim of the hole.

Over I went, and down I came, head first, on the ledge. I heard my neck-bones crunch under the weight of my body, and I flopped over sidewise, limp and for a moment helpless, into the stream.

As I rose, and the water gushed out of my ears, I heard from the bank a shout of wild laughter by the spectators of my great diving feat. The boys said afterward that had they known my neck was broken they could not have helped laughing. As they did not know it was *not* broken, and had every reason to think it was, I believed them.

I had enough sense left to strike out feebly for the other shore. My neck was bent over to one side, and I could not straighten it. I swam till my hands touched the gravel bottom, and, dragging myself into three inches of water, lay like a piece of driftwood on the beach.

My strength began to return after a little; and, as the other boys kept up their laughter, my recovery was hastened by indignation.

After that, when I dived, it was in the good, old-fashioned way, face foremost.

IV. A BOY REVOLUTION

"He 's not the principal of the school, and he need n't act as if he were," said Will Perkins. "He 's just hired to teach the Intermediate. I 'm not afraid of him, and he can't lord it over me, either."

"What can you do? You could n't help his punishing you yesterday."

"I can't do anything alone, I suppose. But we can organize an insurrection."

"Whew! I had n't thought of that."

Frank's mouth and eyes were distended. Will's suggestion brought with it so many others that they could not get in through his ears, which were always wide open. As usual, the ideas came to Frank from outside.

The September term had just opened, and the boys had come down to the swimming-hole after the second day's session.

Mr. King taught in the Intermediate department. This was his second term, and it had begun badly. He was not mean, but was quick-tempered, and the boys were naturally prejudiced against any one set over them by the principal.

The swimming-hole was so temptingly near, that on the first day of school several of the boys had gone swimming at recess, in spite of the rule against it. Some one (I rather think it was Tommy Toles, the trick was so like him) had tied one of Will's shirt-sleeves, and then dipped it in the water and pulled the knot tight. Will was made late in consequence, which directed suspicion to him; and his damp hair and very clean hands were such strong evidences of guilt that Mr. King gave him the first whipping of the season, and made it severe.

The boys were indignant, and when Will struck the spark they took fire like a bundle of fagots. French republicans were never more quickly aroused to revolution.

The boys all came out of the water, hurried into their clothes, and held a conclave on the bank near the big tree. They were to fight "for liberty or death," as Will solemnly declared.

"Let 's go out on a strike," said Ed Bristol. "At a given signal" (you know they always act at a given signal), "we 'll all take our books and go home."

But this was too tame for the more reckless conspirators, some of whom proposed such dire vengeance as made the rest fairly shudder.

At last what was considered a middle course was determined on, as laid down by Will Perkins:

"One of us must do something to make Mr. King call him out on the floor, and instead of obeying he must lead the way and the rest must follow, and we 'll soon see if he can do anything with all of us against him."

"But who 'll be the leader?"

"I 'd just as lief; but that ought to be settled

by lot. We 'll draw cuts, and whoever gets the marked one shall be the leader. Before we begin we must each take a solemn vow on a jack-knife (I 've got one that will do) to abide by the lot, and be the leader if it falls to him, or to follow the one who is."

So Will administered the "oath of allegiance" on the blade of his jack-knife; tore a leaf from "Mensuration," out of his Practical Arithmetic—for what boy of thirteen expects ever to study the last part of his arithmetic!—and then cut the leaf into narrow slips and marked a black cross on one of them. The lots were drawn in silence, and the choice fell on Frank Barnes.

Now, Frank was never a very brave boy, and what courage he had, vanished the instant he saw that black cross on the slip of paper he drew from Will's hat. But he was in for it now, and must bear up or be "forever branded as a coward," in the terms of the knife-blade vow.

Next day, when school opened, the boys were all rather quieter than usual, and Frank was so pale that his freckles showed round and distinct all over his face.

At recess, Will, who had been watching the chosen leader, said to him:

"Frank, I don't think you can stand up to the teacher when the time comes."

"Oh, yes, I can." But Frank's lips were dry, and his voice was faint.

"I don't believe it. Suppose you let me be the leader." Will was yet smarting in spirit from his whipping, and felt valorous and revengeful.

"Well, of course, if you want to very much, I 'll let you," answered Frank, trying not to look relieved.

Will called the boys together and announced that he would give the signal.

"When I say, 'Come on!' you follow me."

"All right," said the boys.

Soon after recess, Will whispered openly to Ed Bristol, behind him.

"Will Perkins, come forward!" said Mr. King.

"I won't!"

Will felt like a fighting-cock, and his voice was sharp and clear.

"What!" roared Mr. King, as he rose suddenly and stepped forward. His eyes shot fire. He seemed to have grown two feet taller, and towered like a giant approaching Tom Thumb. But Will looked him boldly in the face.

"I won't!" he repeated; and, throwing off his coat, he rolled up his shirt-sleeves and started to meet the enemy with a yell: "Come on, boys!"

Not a boy moved.

The sight of Mr. King's terrible face had been too much for them. Will was in, but none of the rest dared follow. He glanced about at them. Every eye was glued to a book. The horror of his situation seized him as Mr. King, instead of the boys, "came on," ferule in hand.

Will turned and fled, followed by the angry teacher. Round and round the room he ran, over desks and benches, dodging down the aisles, and throwing behind him to impede his pursuer tables, chairs, books, whatever he could get hold of in his mad haste. The door was shut, and he knew it opened hard. There was one window-sash down from the top. If he could only gain time to reach the sill before he was caught, Will thought he might vault to freedom.

He heard a fall, looked back without stopping, and saw that Mr. King had stumbled over a stool he had just thrown between them. The open window was before him. With the agility of fear he sprang to the sill, fell rather than jumped over the lowered sash, and landed on his back in the gravel path outside. He had escaped!

Next day, the boy's mother came with him to school in the middle of the morning session. As they walked up the aisle, Will looked about him on his faithless allies, who could not meet his reproachful gaze.

He and his mother sat on the front bench while Mr. King held a long and low-voiced conversation with them, watched with eager curiosity by the other boys. A reconciliation was effected at last. Will went to his seat, and his mother went home.

The Revolution was over.

V. A HORNETS' NEST

My mother had come to spend the month of September with Charlie's mother, and had brought my younger brother, Robert. I was attending school with Charlie, because there was only a District School in the village where we lived. But Robert's eyes were not strong, and the doctor had said that for the present he must not study. Charlie and I wished that we could have weak eyes, too. When we were kept at home by illness, we were generally so light-headed, or so shaky in the legs, that we could n't have any fun. But a boy with weak eyes could play just the same as usual.

One evening soon after the Revolution in school, mother called us aside just as we were starting for bed.

"This afternoon," said she, "Charlie heard some of the boys talking over a plan to frighten you and Robert to-morrow. He wanted to warn you without tattling, and asked me to give you a hint. Then you can look out for yourselves.

Now, I will ask you one question. Do hornets ever build their nests down near the water? You need n't answer, but you may think about it, and talk it over."

So off we went upstairs, puzzled. Do hornets ever build their nests down near the water? What a queer question!

"Last one in bed puts out the light!"

We had walked very slowly upstairs, but at this challenge from me we both began to undress with great speed. Our coats came off together, and then our collars—neck and neck. Down we went on the floor, like a well-drilled regiment's "Order arms!" and began to unlace our shoes in unison. The rights came off together; but, with too hasty fingers, I pulled the end of my left shoestring through the loop. I was the one to put out the light—after that knot was untied—and then I crawled in beside my little brother, who would much rather not have won by a "foul."

Soon we began to talk over the mysterious question, Do hornets ever build their nests down near the water?

"Do you suppose the boys will play they 're hornets, and sting us with big thistles!" asked Bobby, with an anxious voice.

"Perhaps so; but they won't dare try it if Ned Barnes is there."

"If he is n't I won't go in," said Bobby, in the tone of one who has made up his mind.

"We 'll go down, anyway. Perhaps there 's a real hornets' nest, and we may find it. We can tell by the way the boys act, what to do."

The next afternoon, much to our relief, Ned Barnes came down to the swimming-hole soon after our arrival there, and Bobby and I did not feel obliged to sit and watch the other boys having all the fun. There was whispering among the boys, but we knew what it was about, and were ready for any trick they might dare play while Ned was there. This was Bobby's first visit to the spot, but he could swim like a little duck, and was to be our companion, instead of joining the paddlers of his own age in the shallow water, up stream.

For all my little brother's bright blue eyes were not strong, they were a much better pair of observers than mine; and if there were a hornets' nest to be seen, I depended chiefly on him to discover it.

This time I was undressed first, taking care about my shoestrings; and after the usual ceremonial soaking of my brown hair with water, and burying my browner face in a double handful of it, I dived into the deep hole.

I have already told how the current would carry us swiftly under the big tree that projected above the stream, and how we would clutch it and thereon reach the bank. But this time, as I came up, turned on my back, and was borne under the tree, I saw, hanging out from the down-stream side of the trunk—IT!

I did n't clutch the tree, but floated past, scrambled out on the bank below, and hastened to where my brother was about to make his maiden plunge into our swimming-hole.

"Wait, wait, Bobby!" I cried, in a hoarse whisper. "I want to tell you something. The nest is on that big tree. You dive once, so 's not to seem afraid; but get to land without touching the tree. Then we 'll go home."

The other boys were so busy that, when Bobby had made his plunge, we quietly dressed and slipped away unnoticed.

When Charlie arrived about tea-time, he asked me:

"What was the matter with you this afternoon? Why did you come up to the house so early?"

"Oh, you need n't pretend," said I. "You were a trump to give us that hint."

"What about?"

"Aw! you know. About the hornets' nest on the trunk of the big tree."

"There is n't any nest on the tree, that I know of. There was one on the old stump up by the shallows, yesterday; and the fellows meant to have some fun with you by knocking it off, and making the hornets mad. But some one else destroyed it before we got there this afternoon."

"But I saw a nest on the tree myself," I insisted.

"Why did n't the rest of us see it, then?"

"You would have seen it if you 'd been on the lookout, as I was; and I wonder you did n't see it, anyway."

"But don't you suppose that some one of the boys would have hit it when he pulled himself out of the water?"

"I should think so. I saw it only just in time to keep from hitting it myself."

"I believe you only imagined you saw a nest, because you were afraid. Just as people afraid of ghosts are always thinking they see 'em."

"I was n't afraid. Come down there and I 'll show it to you."

"All right, but I know you won't find any nest."

So that evening, after tea, Charlie, Bobby, and I went again to the swimming-hole. When we reached the stream, our shoes and the lower ends of our trousers were soaked with dew from the long meadow grass through which we had waded. It was nearly dusk. We got down on our hands and knees at the edge of the bank below the tree, and peered at the place we had come to look at,

and there saw—a big, brown, warty knot on the trunk. In all the times I had seen the trunk of that tree, I had never noticed the knot; but I had never before been looking out so sharply for a hornets' nest.

Charlie and Bobby looked at each other, but they both kept still—so still, in fact, that they made me nervous. But they were very good about it, and the chaffing I expected never came.

The way back seemed to me a great deal longer than that we had come, though it was over the same ground. Across the meadow it was slightly up hill from the stream, and perhaps that was the reason. The long grass matted and tangled before us, and our shoes ripped through it as we crossed the meadow in the growing darkness.

We were so tired when we reached home that we went straight up to bed, talking over the events of the day.

"Now let 's go to sleep, Bobby," said I, at last. "Good night."

"Well, good night," said Bobby.

"Good night."

"Good night."

"There; did you hear the clock strike nine? Well, after nine o'clock we must n't talk. I 'll say good night, and then we 'll stop. Good night."

"Good night," echoed Bobby.

"You ought n't to answer me, when it 's so late. You 've said good night, and now I 'll answer, and then we must go to sleep. Good night."

"Good night," said Bobby.

"Why do you keep on answering? Suppose we say it together, after I count three."

"All right," said Bobby.

"Now, then. One, two, three—"

"Good—night!" we both exclaimed, together.

In three minutes more we were sound asleep.

VI. NATHAN DOOLITTLE'S LAWN PARTY

"WHY don't you fellows come up to *my* house, sometimes?" said Nathan Doolittle.

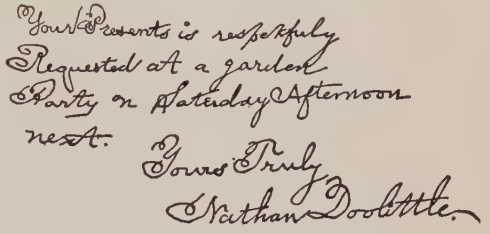
"Oh, you live so far off, up hill, that we need a special invitation."

The other boys all laughed. The fact was, Nathan had asked them to his house a great many times, and they were tired of making excuses for not going.

Nathan had just now drawn himself out of the swimming-hole, by means of the big tree, and was sitting on the bank below, with his feet over the edge, dipping them into the current and watching the water curl around his sharp little ankle-bones. He was the last to leave the stream, and the other boys were in all stages of dressing, from Tommy Toles pulling a flannel shirt down over his shock of red hair, like an extinguisher putting out a candle, to Archie Lawrence slipping a neat city necktie under the round edge of his snowy linen collar. The country boys wore paper collars; but Archie, who came every summer from New York to visit his grandmother, wore linen ones, regardless of the trouble of "doing them up."

Nathan Doolittle was one of the kind of boys that are always hanging on at the edge of the circle, but never able to become a part of it. He lived in a great, staring, red brick house, set far back from the road, and approached through a semicircular driveway that would have been inviting if lined with trees, but was hot and dusty because the only trees in front of the house were a few small evergreens near the center of the lawn, which was cut up and spoiled by stiff flower-beds. Standing about in the grass were several cast-iron dogs and a cast-iron deer. Instead of running away, the deer was trying to stare the dogs out of countenance.

Nathan said no more on the subject then; but the next afternoon, Wednesday, he appeared at the swimming-hole with the right pocket of his jacket bulging, and began at once to relieve it by handing around some rather soiled and crumpled sealed envelops, of various shapes and sizes. In mine I found a half-sheet of note-paper, with this writing on it:



Each of the others found in his envelop a like invitation.

"Is Saturday your birthday, Nathan?" asked Ed Bristol.

"No. Why?"

"Oh, nothing; I only thought perhaps it might be."

It was one thing not to go to Nathan's house when he asked us offhand, and quite another to refuse an invitation to a real party. We all accepted on the spot.

When we left the swimming-hole, we straggled along through the meadow, which was already turning brown, past the apple-tree from which the little red apples were all gone, and along the

lane to the gate between it and the main village road. As we separated, Will Perkins called out:

"Nathan, what time will you expect us, Saturday?"

"Oh, about this time," answered Nathan, with an important air.

Saturday seemed like Sunday in my uncle's side yard, for none of the boys were there. They were all getting ready for the party. It seemed yet more like Sunday when, about a quarter to five o'clock, Charlie, Bobby, and I, dressed in our best clothes, started down the gravel path and went out the front gate. We turned to the right, and soon met two or three more boys, dressed up, as we were, and we all went up the hill toward Nathan's house.

As we entered, and walked along the driveway, we saw Nathan, and several early guests, standing around with their hands in their pockets on the lawn at the side of the house.

"Hullo, boys!" was Nathan's greeting. "Come over here."

We had expected to be asked into the house first; but were glad not to be, for Mrs. Doolittle did n't seem to like boys, and so boys did n't like Mrs. Doolittle. We had wondered that she allowed Nathan to have a party, anyway.

Before long, Lou Preston, Will Perkins, and Frank Barnes arrived, and, a few minutes later, some more boys. They all were asked, as we had been, to join the group on the side lawn.

The honors of host seemed to sit rather heavily on Nathan, and in consequence a chill was on the company. Nathan, we noticed, had on his everyday clothes: brown trousers, and a bottle-green jacket with bone buttons. We wished that we had ours on, too, so that we might lie around on the grass as usual.

"Let 's play leapfrog," suggested Nathan desperately, at last.

As no one could think of an outdoor game better suited to our best clothes, we played leapfrog, but so cautiously that no frog would have recognized our leaps. In trying to vault Sam Seaver, who was long and awkward, and did n't bend over far enough, I stumbled headlong on my hands and knees. The skin was scraped from the palms of my hands, and in its place was spread a thin layer of dark-brown earth, well ground on and streaked with green. My hands smarted, but were not so sore as my feelings when I looked down and found two hopeless grass-stains on my trousers, just below the knees. They were my white duck trousers, the pride of summer, made over for me out of a pair in which bluff Uncle Harry had often paced the quarter-deck of his frigate, in fine weather. The sight almost took away my appetite for supper. By this time, none of the boys were so spruce as when they came. Their wristbands were wrinkled and their hands were grimy; but they were more than ready for the hot biscuit, cold ham, and perhaps ice-cream, in prospect, when Nathan asked:

"What time is it, Charlie?"

Charlie looked at a new silver watch, with an effort to appear quite used to it.

"Ten minutes past six."

"Is that so? Why, it 's after supper-time! Have you fellows had your grub?"

For a minute you might have heard a mosquito sharpening his bill. Then some one answered faintly, "No."

"Well, I must go now, and get mine. You just make yourselves at home, and I 'll be back before long."

"Hold on, Nathan," drawled Lou Preston. "I 'd like to understand this. The fact is, you see, we all thought that we were invited to take supper with you."

"Oh, no; I did n't mean that. I was afraid you thought so, when I saw you all dressed up. But perhaps mother will—"

"You need n't ask her. I guess we 'll go now —won't we, boys?"

In less than half an hour, fifteen very hungry boys arrived, unexpected, at their homes, told their story, and were glad to eat whatever they could get, instead of a lawn-party supper.

BREWSTER'S DÉBUT

BY RALPH HENRY BARBOUR

I

The gong clanged, the last man sprang aboard, and the car trundled away to the accompaniment of a final lusty cheer from the crowd which still lingered in front of the hotel. Then a corner was turned, and the last long-drawn *"Er-r-rskine!"* was cut short by intercepting walls. The throngs were streaming out to the field where, on the smooth green diamond, the rival nines of Robinson and Erskine were to meet in the deciding game of the season. For a while the car with its dozen or so passengers followed the crowds, but presently it swung eastward toward the railroad, and then made its way through a portion of Collegetown which, to one passenger at least, looked far from attractive.

Ned Brewster shared one of the last seats with a big leather bat-bag, and gave himself over to his thoughts. The mere fact of his presence there in the special trolley car as a substitute on the Erskine varsity nine was alone wonderful enough to keep his thoughts busy for a week. Even yet he had not altogether recovered from his surprise.

Ned had played the season through at center field on the freshman nine, and had made a name for himself as a batsman. On Thursday the freshman team had played its last game, had met with defeat, and had disbanded. Ned, trotting off the field, his heart bitter with disappointment at the outcome of the final contest, had heard his name called, and had turned to confront "Big Jim" Milford, the varsity captain.

"I wish you would report at the varsity table to-night, Brewster," Milford had said. Then he had turned abruptly away, perhaps to avoid smiling outright at the expression of bewilderment on the freshman's countenance. Ned never was certain whether he had made any verbal response; but he remembered the way in which his heart had leaped into his throat and stuck there, as well as the narrow escape he had had from dashing his brains out against the locker-house, owing to the fact that he had covered most of the way thither at top speed. That had been on Thursday; to-day, which was Saturday, he was a substitute on the varsity, with a possibility—just that and no more—of playing for a minute or two against Robinson and so winning his E in his freshman year, a feat accomplished but seldom!

Ned had been the only member of the freshman nine taken on the varsity that spring. At first this had bothered him; there were two or three others—notably Barrett, the freshman captain—who were, in his estimation, more deserving of the good fortune than he. But, strange to say, it had been just those two or three who had shown themselves honestly glad at his luck, while the poorest player on the nine had loudly hinted at favoritism. Since Thursday night Ned had, of course, made the acquaintance of all the

varsity men, and they had treated him as one of themselves. But they were all, with the single exception of Stilson, seniors and juniors, and Ned knew that a freshman is still a freshman, even if he does happen to be a varsity substitute. Hence he avoided all appearance of trying to force himself upon the others, and so it was that on his journey to the grounds he had only a bat-bag for companion.

The closely settled part of town was left behind now, and the car was speeding over a smooth, elm-lined avenue. Windows held the brown banners of Robinson, but not often did a dash of purple meet the gaze of the Erskine players. At the farther end of the car McLimmont and Housel and Lester were gathered about "Baldy" Simson, the trainer, and their laughter arose above the talk and whistling of the rest. Nearer at hand, across the aisle, sat "Lady" Levett, the big first-baseman. Ned wondered why he was called "Lady." There was nothing lady-like apparent about him. He was fully six feet one, broad of shoulder, mighty of chest, deep of voice, and dark of complexion—a jovial, bellowing giant whom everybody liked. Beside Levett sat Page, the head coach, and Hovey, the manager. Then there were Greene and Captain Milford beyond, and across from them Hill and Kesner, both substitutes. In the seat in front of Ned two big chaps were talking together. They were Billings and Stilson, the latter a sophomore.

"I 'll tell you what I 'll do," Billings was saying. "If we lose I 'll buy you a dinner at the Elm Tree Monday night; if we win you do the same for me."

"Oh, I don't bet!"

"Get out! That 's fair, is n't it, Brownie?"

A little round-faced chap across the aisle nodded laughingly. His name was Browne and he played short-stop. He wrote his name with an *e*, and so his friends gave him the full benefit of it.

"Yes, that 's fair," said Browne. "We 're bound to lose."

"Oh, what are you afraid of?" said Stilson.

"No; that 's straight! We have n't much show; we can't hit Dithman."

"*You* can't, maybe," jeered Stilson.

"I 'll bet you can't either, my chipper young friend!"

"I 'll bet I get a hit off him!"

"Oh, *one!*"

"Well, two, then. Come, now!"

"No; I won't bet," answered Browne, grinning. "If there 's a prize ahead, there 's no telling what you 'll do; is there, Pete?"

"No; he might even make a run," responded Billings. "But it 's going to take more than two hits to win this game," he went on, dropping his voice, "for I 'll just tell you they 're going to pound Hugh all over the field."

"Well, what if they do get a dozen runs or so?" said Stilson. "Have n't we got a mighty batter, imported especially for the occasion, to win out for us?"

"Whom do you mean?" asked Billings.

"I mean the redoubtable Mr. Brewster, of course,—the freshman Joan of Arc who is to lead us to vict——"

"Not so loud," whispered Browne, glancing at Ned's crimsoning cheeks.

Stilson swung around and shot a look at the substitute, then turned back grinning.

"Cleared off nicely, has n't it?" he observed with elaborate nonchalance.

Ned said to himself, "He 's got it in for me because he knows that if I play it will be in his place."

The car slowed down with much clanging of gong, and pushed its way through the crowd before the entrance to the field. Then, with a final jerk, it came to a stop. "All out, fellows!" cried Hovey; and Ned followed the others through the throng, noisy with the shouts of ticket and score-card venders, to the gate and dressing-room.

II

Ned sat on the bench. With him were Hovey, the manager, who was keeping score, Hill and Kesner, substitutes like himself, and, at the farther end, Simson, the trainer, and Page, the head coach. Page had pulled his straw hat far over his eyes, but from under the brim he was watching sharply every incident of the diamond, the while he talked with expressionless countenance to "Baldy." Back of them the grand stand was purple with flags and ribbons, but at a little distance on either side the purple gave place to the brown of Robinson. Back of third base, at the west end of the stand, the Robinson College band held forth brazenly at intervals, making up in vigor what it lacked in tunefulness. In front of the spectators the diamond spread deeply green, save where the base-lines left the dusty red-brown earth exposed, and marked with lines and angles of lime, which gleamed snow-white in the afternoon sunlight. Beyond the diamond the field stretched, as smooth and even as a great velvet carpet, to a distant fence and a line of trees above whose tops a turret or tower here and there indicated the whereabouts of town and college.

Ned had sat there on the bench during six innings, the sun burning his neck and the dust from the batsman's box floating into his face. In those six innings he had seen Erskine struggle pluckily against defeat—a defeat which now, with the score 12—6 in Robinson's favor, hovered, dark and ominous, above her. Yet he had not lost hope; perhaps his optimism was largely due to the fact that he found it difficult to believe that Fate could be so cruel as to make the occasion of his first appearance with the varsity team one of sorrow. He was only seventeen, and his idea of Fate was a kind-hearted, motherly old soul with a watchful interest in his welfare. Yet he was forced to acknowledge that Fate, or somebody, was treating him rather shabbily. The first half of the seventh was as good as over, and still he kicked his heels idly beneath the bench. Page did n't seem to be even aware of his presence. To be sure, there were Hill and Kesner in the same box, but that did n't bring much comfort. Besides, any one with half an eye could see that Stilson should have been taken off long ago; he had n't made a single hit and already had three errors marked against him. Ned wondered how his name would look in the column instead of Stilson's, and edged along the bench until he could look over Hovey's shoulder. The manager glanced up, smiled in a perfunctory way, and credited the Robinson runner with a stolen base. Ned read the batting list again:

BILLINGS, r. f.
GREENE, l. f.
MILFORD, 2b., Capt.
LESTER, p.
BROWNE, ss.
HOUSEL, c.
MCLIMMONT, 3b.
LEVETT, 1b.
STILSON, c. f.

There was a sudden burst of applause from the seats behind, and a red-faced senior with a wilted collar balanced himself upon the railing and begged for "one more good one, fellows!" The first of the seventh was at an end, and the Erskine players, perspiring and streaked with dust, trotted in. "Lady" Levett sank down on the bench beside Ned with a sigh, and fell to examining the little finger of his left hand, which looked very red and which refused to work in unison with its companions.

"Hurt?" asked Ned.

"Blame thing 's bust, I guess," said "Lady," disgustedly. "Oh, Baldy, got some tape there?"

The trainer, wearing the anxious air of a hen with one chicken, bustled up with his black bag, and Ned watched the bandaging of the damaged finger until the sudden calling of his name by the head coach sent his heart into his throat and brought him leaping to his feet with visions of hopes fulfilled. But his heart subsided again in the instant, for what Page said was merely:

"Brewster, you go over there and catch for Greene, will you?" And then, turning again to the bench, "Kesner, you play left field next half."

Ned picked up a catcher's mitt, and for the rest of the half caught the balls that the substitute pitcher sent him as he warmed up to take Lester's place. Greene did n't keep him so busy, however, that he could n't watch the game. Milford had hit safely to right field and had reached second on a slow bunt by Lester. The wavers of the purple flags implored little Browne to "smash it out!" But the short-stop never found the ball, and Housel took his place and lifted the sphere just over second-baseman's head into the out-field. The bases were full. The red-faced senior was working his arms heroically and begging in husky tones for more noise. And when, a minute later, McLimmont took up his bat and faced the Robinson pitcher, the supporters of the purple went mad up there on the sun-smitten stand and drowned the discordant efforts of the Robinson band.

McLimmont rubbed his hands in the dust, rubbed the dust off on his trousers, and swung his bat. Dithman, who had puzzled Erskine batters all day and had pitched a magnificent game for six innings, shook himself together. McLimmont waited. No, thank you, he did n't care for that out-shoot; nor for that drop; nor for—— What? A strike, did he say? Well, perhaps it did go somewhere near the plate, though to see it coming you 'd have thought it was going to be a passed ball! One and two, was n't it? Thanks; there was no hurry then, so he 'd just let that in-curve alone, wait until something worth while came along, and—*Eh!* what was that? Strike two! Well, well, well, of all the umpires this fellow must be a beginner! Never mind that, though. But he 'd have to look sharp now or else——

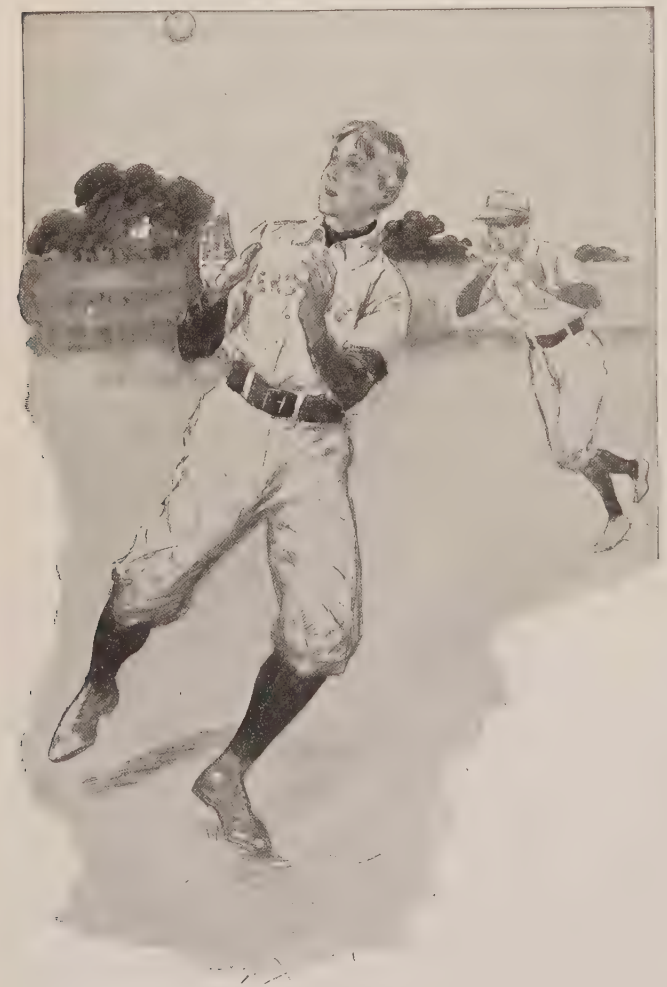
Crack!

Off sped the ball, and off sped McLimmont. The former went over first-baseman's head; the latter swung around the bag like an automobile taking a corner, and raced for second, reaching it on his stomach a second before the ball. There was rejoicing where the purple flags fluttered, for Captain Milford and Lester had scored.

But Erskine's good fortune ended there.

McLimmont was thrown out while trying to steal third, and Levett popped a short fly into the hands of the pitcher. Greene trotted off to the box, and Ned walked dejectedly back to the bench. Page stared at him in surprise. Then, "Did n't I tell you to play center field?" he ejaculated.

Ned's heart turned a somersault and landed in his throat. He stared dumbly back at the



"'MY BALL!' HE SHOUTED."

head coach and shook his head. As he did so he became aware of Stilson's presence on the bench.

"What? Well, get a move on!" said Page.

Get a move on! Ned went out to center as though he had knocked a three-bagger and wanted to get home on it. Little Browne grinned at him as he sped by.

"Good work, Brewster!" he called softly.

Over at left, Kesner, happy over his own good fortune, waved congratulations. In the Erskine section the desultory hand-clapping which had accompanied Ned's departure for center field died away, and the eighth inning began with the score 12—8.

III

From center field the grand stands are very far away. Ned was glad of it. He felt particularly happy and wanted to have a good comfortable grin all to himself. He had won his E. Nothing else mattered very much now. So grin he did to his heart's content, and even jumped up and down on his toes a few times; he would have liked to sing or whistle, but that was out of the question. And then suddenly he began to wonder whether he had not, after all, secured the coveted symbol under false pretense; would he be able to do any better than Stilson had done? Robinson's clever pitcher had fooled man after man; was it likely that he would succeed where the best batsmen of the varsity nine had virtually failed? Or, worse, supposing he showed up no better here in the outfield than had Stilson! The sun was low in the west and the atmosphere was filled with a golden haze; it seemed to him that it might be very easy to misjudge a ball in that queer glow. Of a sudden his heart began to hammer at his ribs sickeningly. He was afraid—afraid that he would fail, when the trial came, there with the whole college looking on! Little shivers ran up his back, and he clenched his hands till they hurt. He wished, oh, how he wished it was over! Then there came the sharp sound of bat against ball, and in an instant he was racing in toward second, his thoughts intent upon the brown speck that sailed high in air, his fears all forgotten in the excitement that now mastered him.

Back sped second-baseman, and on went Ned. "My ball!" he shouted. Milford hesitated an instant, then gave up the attempt. "All yours, Brewster!" he shouted back. "Steady!" Ned finished his run and glanced up, stepped a little to the left, put up his hands, and felt the ball thud against his glove. Then he fielded it to second and trotted back; and as he went he heard the applause, loud and hearty, from the stands. After that there was no more fear. Robinson failed to get a man past first, and

presently he was trotting in to the bench side by side with Kesner.

"Brewster at bat!" called Hovey, and, with a sudden throb at his heart, Ned selected a stick and went to the plate. He stood there swinging his bat easily, confidently, as one who is not to be fooled by the ordinary wiles of the pitcher, a well-built, curly-haired youngster with blue eyes, and cheeks in which the red showed through the liberal coating of tan.

"The best batter the freshmen had," fellows whispered one to another.

"Looks as though he knew how, too, eh? Just you watch him, now!"

And the red-faced senior once more demanded three long Erskines, three times three, and three long Erskines for Brewster! And Ned heard them,—he could n't very well have helped it!—and felt very grateful and proud. And five minutes later he was back on the bench, frowning miserably at his knuckles, having been struck out without the least difficulty by the long-legged Dithman. The pride was all gone. "But," he repeated silently, "wait until next time! Just wait until next time!"

Billings found the Robinson pitcher for a two-bagger, stole third, and came home on a hit by Greene. Erskine's spirits rose another notch. Three more runs to tie the score in this inning, and then—why, it would be strange indeed if the purple could n't win out! Captain Milford went to bat in a veritable tempest of cheers. He looked determined; but so did his adversary, the redoubtable Dithman.

"We 've got to tie it this inning," said Levett, anxiously. "We 'll never do it next, when the tail-enders come up."

"There 's one tail-ender who 's going to hit that chap in the box next time," answered Ned.

"Lady" looked amused.

"You 'll be in luck if it comes around to you," he said. "We all will. Oh, thunder! Another strike!"

A moment later they were on their feet, and the ball was arching into left field; and "Big Jim" was plowing his way around first. But the eighth inning ended right there, for the ball plumped into left-fielder's hands. "Lady" groaned, picked up his big mitt, and ambled to first, and the ninth inning began with the score 12 to 9.

Greene was determined that Robinson should not increase her tally, even to the extent of making it a baker's dozen. And he pitched wonderful ball, striking out the first two batsmen, allowing the next to make first on a hit past short-stop, and then bringing the half to an end by sending three glorious balls over the corner of the plate one after another, amid the frantic cheers of the Erskine contingent and the dismay of the puzzled batsman. Then the rival nines changed places for the last time, and Robinson set grimly and determinedly about the task of keeping Erskine's players from crossing the plate again.

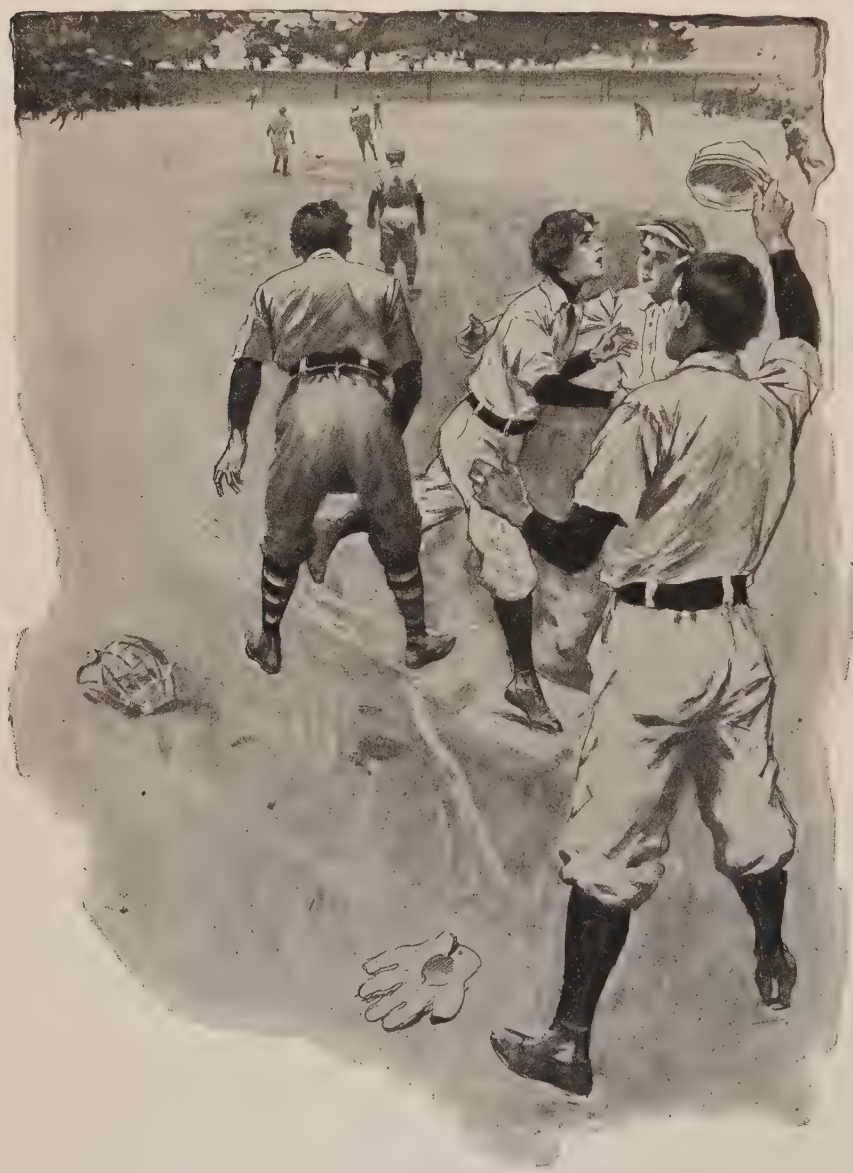
And Milford, leaning above Hovey's shoulder, viewed the list of batting candidates and ruefully concluded that she would not have much trouble doing it.

The stands were emptying and the spectators were ranging themselves along the base-lines. The Robinson band had broken out afresh, and the Robinson cheerers were confident. The sun was low in the west, and the shadows of the stands stretched far across the diamond. Kesner, who had taken Lester's place in the batting list, stepped to the plate and faced Dithman, and the final struggle was on.

Dithman looked as calmly confident as at any time during the game, and yet, after pitching eight innings of excellent ball, it scarcely seemed likely that he could still command perfect form. Kesner proved a foeman worthy of his steel; the most seductive drops and shoots failed to entice him, and with three balls against him Dithman was forced to put the ball over the plate. The second time he did it, Kesner found it and went to first on a clean hit into the out-field past third, and the purple banners flaunted exultantly. Milford's face took on an expression of hopefulness as he dashed to first and whispered his instructions in Kesner's ear. Then he retired to the coaches' box and put every effort into getting the runner down to second. But Fate came to his assistance and saved him some breath. Dithman lost command of the dirty brown sphere for one little moment, and it went wild, striking Greene on the thigh. And when he limped to first Kesner went on to second, and there were two on bases, and Erskine was mad with joy. Milford and Billings were coaching from opposite corners, Milford's bellowing being plainly heard a quarter of a mile away; he had a good, hearty voice, and for the first time that day it bothered the Robinson pitcher. For Housel, waiting for a chance to make a bunt, was kept busy getting out of the way of the balls, and after four of them was given his base.

Erskine's delight was now of the sort best expressed by turning somersaults. As somersaults were out of the question owing to the density of the throng, her supporters were forced to content themselves with jumping up and down and shouting the last breaths from their bodies.

Bases full and none out! Three runs would tie the score! Four runs would win! And they 'd get them, of course; there was no doubt about that—at least, not until McLimmont had struck out and had turned back to the bench with miserable face. Then it was Robinson's turn to cheer. Erskine looked doubtful for a moment, then began her husky shouting again; after all, there was only one out. But Dithman, rather pale of face, had himself in hand once more. To the knowing ones, Levett, who followed McLimmont, was already as good as out; the way in which he stood, the manner in which he "went down" for the balls, proved him nervous and over-anxious. With two strikes and three balls called on him, he swung at a wretched out-shoot. A low groan ran along the bench. Levett himself did n't groan; he placed his bat carefully on the ground, kicked it ten yards away, and said "Confound the luck!" very forcibly.



"NED TROTTED OVER THE PLATE INTO THE ARMS OF 'BIG JIM' MILFORD."

"You 're up, Brewster," called Hovey.

"Two gone! Last man, fellows!" shouted the Robinson catcher, as Ned tapped the plate.

"Last man!" echoed the second-baseman. "He 's easy!"

"Make him pitch 'em, Brewster!" called Milford. The rest was drowned in the sudden surge of cheers from the Robinson side. Ned faced the pitcher with an uncomfortable empty feeling inside of him. He meant to hit that ball, but he greatly feared he would n't; he scarcely dared think what a hit meant. For a moment he wished himself well out of it—wished that he was back on the bench and that another had his place and his chance to win or lose the game. Then the first delivery sped toward him, and much of his nervousness vanished.

"Ball!" droned the umpire.

Milford and Levett were coaching again; it was hard to say whose voice was the loudest. Down at first Housel was dancing back and forth on his toes, and back of him Milford, kneeling on the turf, was roaring: "Two gone, Jack, remember. Run on anything! Look out for a passed

ball! Now you 're off! Hi, hi, hi! *Look out!* He won't throw! Take a lead—go on! Watch his arm; go down with his arm! Now you 're off! *Now, now, now!"*

But if this was meant to rattle the pitcher it failed of its effect. Dithman swung his arm out, danced forward on his left foot, and shot the ball away.

"Strike!" said the umpire.

Ned wondered why he had let that ball go by; he had been sure that it was going to cut the plate, and yet he had stood by undecided until it was too late. Well! He gripped his bat a little tighter, shifted his feet a few inches, and waited again. Dithman's expression of calm unconcern aroused his ire; just let him get one whack at that ball and he would show that long-legged pitcher something to surprise him! A palpable in-shoot followed, and Ned staggered out of its way. Then came what was so undoubtedly a ball that Ned merely smiled at it. Unfortunately at the last instant it dropped down below his shoulder, and he, of course, waited anxiously for the verdict.

"Strike two!" called the umpire. The sound of that call is always unwelcome.

Two and two! Ned's heart sank. He shot a glance toward first. Milford was staring over at him imploringly. Ned gave a gasp and set his jaws together firmly. The pitcher had the ball again, and was signaling to the catcher. Then out shot his arm, the little one-legged hop followed, and the ball sped toward the boy at the plate. And his heart gave a leap, for the delivery was a straight ball, swift, to be sure, but straight and true for the plate. Ned took one step forward, and ball and bat met with a sound like a pistol-shot, and a pair of purple-stockinged legs were flashing toward first.

Up, up against the gray-blue sky went the sphere, and then it seemed to hang for a moment there, neither rising nor falling. And all the time the bases were emptying themselves. Kesner was in ere the ball was well away, Greene was close behind him, and now Housel, slower because of his size, was swinging by third; and from second sped a smaller, lithe figure with down-bent head and legs fairly flying. Coaches were shouting wild, useless words, and none but themselves heard them; for four thousand voices were shrieking frenziedly, and four thousand pairs of eyes were either watching the flight of the far-off ball, or were fixed anxiously upon the figure of left-fielder, who, away up near the fence and the row of trees, was running desperately back.

Ned reached second, and, for the first time since he had started around, looked for the ball. And, as he did so, afar off across the turf a figure stooped and picked something from the ground and threw it to center-fielder. And center-fielder threw it to third-baseman. And meanwhile Ned trotted over the plate into the arms of "Big Jim" Milford, and Hovey made four big black tallies in the score-book. Three minutes later and it was all over, Billings flying out to center field, and the final score stood 13—12. Erskine owned the field, and Ned, swaying and slipping dizzily about on the shoulders of three temporary lunatics, looked down upon a surging sea of shouting, distorted faces, and tried his hardest to appear unconcerned—and was secretly very, very happy. He had his E; best of all, he had honestly earned it.

"FRESH WOODS AND PASTURES NEW."

Photo by C. J. Greenleaf.

A GROUP OF NORTH AMERICAN BISON.

This photograph was taken in the Rocky Mountains Park, Canada, and shows part of the Canadian national herd. The majestic bull at the right is "Sir Donald." At the time his portrait was obtained he was thirty-four years old and the only living North American bison captured from a wild herd.

ANIMAL TRACKS AND OTHER STUDIES

TRACKS IN THE SNOW

BY ERNEST THOMPSON SETON

(*Illustrated by the Author*)

Of all the feats common to hunting-life and woodcraft, none seems to me half so wonderful as tracking or trailing. As practised by man, tracking is wonderful enough; but far more marvelous is the power by which a dog or fox can follow its prey at full speed, guided only by scent, without erring or being led astray.

To us, the word scent has but little meaning; it is the name of a power with which man is, comparatively, almost unendowed. We go into the woods and see nothing but a leaf-strewn ground, thinly scattered over with herbs and thickly planted with trees; we see no quadruped, and find no sign of any, perhaps, save the far-away chatter of a squirrel. But our dog, merrily careering about, is possessed of a superior power. At every moment of his course he is gathering facts, and reading a wonderful record of the past, the present, and even of the future. "Here," says his unseen guide, "is where a deer passed a minute ago," or "an hour ago"; "this was the course of a fox a week ago"; "that was the direction in which a rabbit flew by a few minutes ago, and, oho! there was a weasel after him!" "This is the track of a woodchuck leading away to yonder hole; there he lies still, and with the help of your master, you will take him home with you."

Such is the curious record of scent, revealed to the dog but hidden from the man, and even inexplicable to him; for though we have a theoretical knowledge of the subject, it is too imperfect to make us fully understand that not only has every kind of animal, but each individual animal, its own peculiar scent. Thus, the dog can distinguish not only the bucks, does, and fawns of the deer tribe, but can pick out of a dozen the track of the particular buck that he is following, and never leave it or lose it. Moreover, he can tell by the scent which way the animal is going, and he is never known to run backward on a trail. Now, when we compare this wonderful power with our own feeble sense of smell, we will be ready to admit that it is a faculty of which man, comparatively, has little.

Let us suppose that you were to awake some fine morning and find that, as in the old fairy tales, a mighty genius had conferred on you a new and wonderful faculty, that enabled you to go forth and read the running records with even greater accuracy and ease than can the hound—what a marvel it would be, and how intensely interesting its exercise to a lover of Nature! And yet this very miracle is what actually takes place every year in our northern country. The great genius is old Boreas, and the means by which he confers the new power is the first fall of snow.

This first snowfall makes the beginning of the real hunting-season with most of the northern tribes of men; for until then it is chiefly by chance that the hunters find their game. Now the hunter has the power of the hound, in that he can follow a track, and read accurately the record of the animal's actions, its appearance, and even of its very feelings. And it was with a view to showing and explaining some of the curiosities of "the trail," that I made, in the woods, the notes and sketches here presented. The snow, at the time, was light and powdery, so that the minute details of each track were unseen, but to one with even a slight knowledge of the subject, the size and general form of the marks is enough to give all necessary information about the animal that made them.

In the beginning of this article, I alluded to a dog's power of reading the trails on the bare ground. Now here is a sketch of those trails as

FIG. 1. FOOTPRINTS, IN THE SNOW, OF A DEER, A FOX, A WHITE HARE, AN ERMINE, AND TRACK OF A MOUSE.

we would see them in the snow. First of all, the large, sharply defined tracks, ending at D, are those of a deer; not a very large one, because the marks are small and nearly in one line.

The trail marked F is that of a fox. The tracks are small, neat, and nearly in a straight line. The forking of his trail shows that he afterward returned for some distance on his old tracks.

H is the trail of a white hare, bounding at full speed, and over it are the tracks of his terrible enemy, the white weasel or ermine, the stroke in the middle of the ermine's track being made by the tail. The small track M, crossing the corner, is that of a mouse. He came up through the snow, but found the weather too cold, and decided to go down below again.

Thus, in this little square, we see a record, not only of the animals, but of their actions. The deer was at first walking quietly along; at D P he had been pawing in the snow to seek for acorns; at D L he had stopped to lick up some snow; at D S he was startled by a suspicious sound or scent, and stood for a moment with one foot raised and barely touching the snow, and afterward he had somewhat increased his speed. The fox was evidently foraging, and the poor hare running for its life.

Even in the tracks of the hunters themselves we may read a curious history. Thus an old hunting comrade of mine, a broad, athletic man, made a track like C, in diagram No. 2. Another, a tall, thin man, made a track like B. A is the trail of an Indian; D is the trail of a European accustomed to wearing sharp-toed boots. The Indian's foot, you see, is set straight, and his stride is long; the track D shows that the Englishman's foot is much turned out, and his stride short; while the tracks of the moccasin-wearing white men are between the two extremes. I found that in the morning my feet were more nearly straight than at night—also that by turning in the toes the length of the stride was increased. Another advantage from a straight-set foot is that in returning on one's trail it is easy to step exactly in the old marks, and in warfare, or in deep snow, this is often

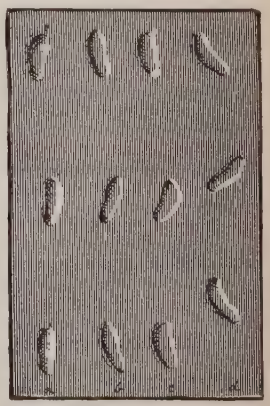


FIG. 2. THE TRACKS OF THE HUNTERS.

a very important advantage to the Indians. If D were to come back on his old tracks his feet would cross them at right angles.

Most of us have read stories in which Indians give accurate descriptions of persons from their tracks; and from this we may learn some real and applied science, and understand how scientific men have been able to describe, to some extent, certain extinct quadrupeds from tracks left in the mud which was once the shore of their marshy haunts. Science owes much to work of this kind.

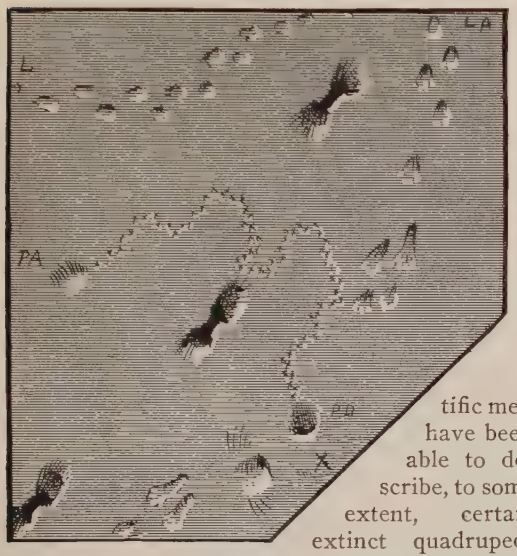


FIG. 3. TRACKS OF A MOOSE, A PARTRIDGE, AND A LYNX.

The first diagram was taken from an open place on the edge of the woods near my prairie home; and now, in No. 3, we have an illustration of trails seen in the deepest woods. In this, the great track like a dumb-bell is that of a moose. The hoof of the animal went down, making the round opening at one end of the footprint, through the deep snow till firm footing was found; then, as the giant bent forward, the thin shank of his leg cut the upper snow and, finally, the withdrawal of his hoof made the second rounded opening. At P A is seen a round hollow, which was made by a partridge alighting. After this his zigzag trail shows that he had been picking off the buds of such twigs as protruded above the drift. But night was coming on, and he decided to retire; not into a tree, but down under the snow—for such is the habit of the species in cold countries. At P D is seen the hole through which he went down. At L we see the track of a prowling lynx, and at L A it again appears; he has noticed the zigzag trail and also the hole in the drift, and now the poor unconscious partridge is indeed in greatest jeopardy. Slowly and cautiously the crafty lynx approaches; already his nose indicates to him that the sleeping bird is almost within reach. He is preparing for a spring; but so near is he at this moment that the faint grinding of his padded feet on the soft snow awakens the bird. Instantly the bird springs up, bursts through the roof of his cot, and, bounding up in the air, eludes the spring of the lynx and in another moment is safe, far away.

It will be noticed that the partridge seemed to have turned in the drift, or he would have come out at X. I always found that this bird thus leaves its couch, by coming out at one side. The reason for this is simple: The breath of the bird freezes and hardens the snow that is just under X, in front, so that it cannot easily force a way through this now icy wall; while the snow at the sides is as light and powdery as ever.

Next after man and the wolverene, perhaps the wolf is the most cunning of all the foes against which harmless birds and beasts have to guard; and here, in diagram No. 4, we have an instance of its cunning in the record of a curious game of "diamond cut diamond"; for this represents the attempt of a hunter to entrap a wolf. At T, the man buried his steel trap under the snow; carefully covered it up, leaving as few traces as possible, and then, after throwing a few scraps of meat about, he passed on. The wolf, coming from W, scents the meat; but he also scents the trail of his enemy. With caution, therefore, he makes his approach, circling around to catch all possible scent. At the track in line with W T he turns and slowly approaches the coveted dainties; in another minute, if the trap is well laid, he will be trotting about picking up the scraps, and will

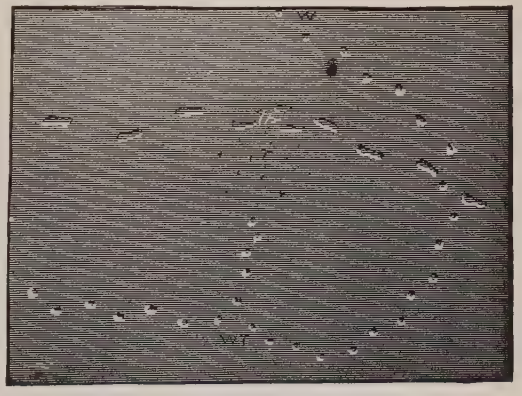


FIG. 4. TRACKS OF A MAN AND A WOLF.

almost surely put his foot on the "pan" and be caught. But he is not rash. Step by step he advances, sniffing the snow and the air, until al-

most within reach of the first bait. He is just about to seize it, when, suddenly, he stops. What is that? Too well he knows. Mingled with the delicious odor of the meat is a taint—the scent of a human hand! Not so fast, O cunning trapper! You remembered to rub the trap with blood, that thereby it might bear scent of neither man nor steel; you thought you handled everything with gloves. But, in a heedless moment, you chanced to touch that scrap of meat with your bare hand, and so you spoiled your whole plot. Instantly the wolf checks his ravenous appetite, steps back in his own tracks with the utmost caution and precision, and, in spite of the hunger that is inwardly consuming him, sets out to seek his dinner somewhere else.

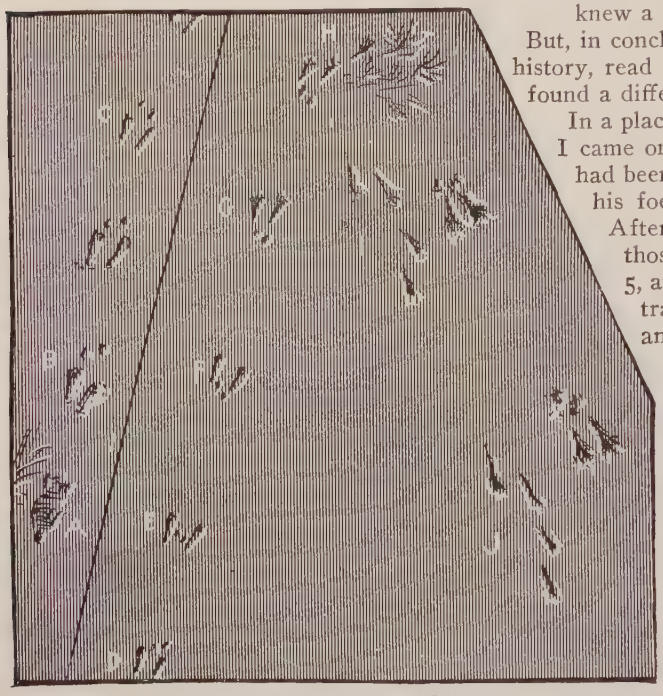


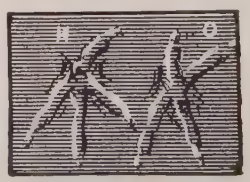
FIG. 5. TRACKS OF A HARE AND A FOX.

In diagram No. 5, we see inscribed an incident in the life of a hare. At A he had been sitting in his form or couch under a sheltering tussock; his sitting posture is shown by the deep hollow and the mark of his tail. But he heard something which made him move out. B, C, and D show his tracks at an ordinary pace; at E and F, he began to go faster, and here we see a peculiarity of the hare's track. As he increases his speed the hind feet track as far forward as the fore feet, and at G the fore feet actually track behind the hind ones. But at H we see that the foolish creature had been running right into danger, and here for the first time we note the track of his enemy, the fox, pursuing at full speed (I and J). Poor Bunny's frantic efforts to turn about are plainly graven in the snow; and his widely spread feet, his vast bounds, and the far backward marks of the fore feet in the subsequent signs, show the tremendous rate of speed at which he flew. It may be a satisfaction to some young readers to learn that in a fair race, such as this, I never knew a fox to catch a hare.

But, in conclusion, I will add another chapter of hare history, read in the snow, and one in which the hare found a different and more dangerous enemy.

In a place where I had never before found a hare, I came on a fresh trail, which showed that Bunny had been flying from some foe—but who or what his foe was, I could not learn from the signs. After following a few yards, I found one of those sudden doublings, as at H, in diagram 5, and very soon another, and again a straight trail for a few yards, and more doublings, and then a few drops of blood. As I followed, there were more doublings and more blood, until at length I discovered the remains of the hapless hare. His enemy had eaten all but the head and the feet. It was plain that this was not the deed of a fox, nor a marten—for no track was to be seen. A weasel might, indeed, have been clinging to the hare during the run, and so have left no track; but then a weasel could not have eaten the hare, and would not have done much more than suck its blood. As I looked about for signs, my eye caught a broad, soft feather sticking to a sapling near by. "Aha! a hawk," I thought. But on looking again at the bloody place on the snow, I saw the faint print of a large two-toed foot, and knew at once, by its size and shape, that it was the track of a barred owl. And then the mystery of the doubling and running from an unseen foe was solved.

I left the spot; but on returning a few minutes later, I was startled by a loud screeching, and immediately the guilty one appeared. After flying around my head two or three times, he settled on a limb near by, and gave me an opportunity to sketch him—I would rather have shot him, but I had no gun with which to avenge the death of the poor unfortunate hare.



FOOTPRINT OF HAWK AND OF OWL.

ANIMAL TRACKS IN THE SNOW

BY BARNEY HOSKIN STANDISH

THERE are three classes of people who are especially interested in animal tracks in the snow: country boys who go cross lots and through woods to school in winter, woodsmen in general, whether hunters, trappers, or lovers of nature, and artists who paint winter landscapes and country scenes. The tracks here represented are copied from nature, with the animal in sight, and are nearly as typical of their kind as the tracks of man are of mankind. In each case they represent the animal as if going up the page, and in each group of tracks the upper or head ones are made by the hind feet (with a possible exception in No. 4). It is with the hind feet upon the ground in front of the fore feet that the animal makes its spring.

The rabbit sleeps by day in tufts of grasses and brush-piles. At night it comes forth to browse, ornamenting the snow with its almost unchanging groups of footprints. It never walks, but it hops a few inches and jumps several feet. In its jumps one fore foot is placed directly in front of the other, and the hind feet are thrown outside and ahead of them. The fore feet come up, one at a time, as the hind feet go down; and the animal is thus doubled up for the leap. No. 1 represents the tracks.

The deer is noted for its long leap and the high rate of speed which it is capable of attaining. Unlike the rabbit or the fox, it has hoofs, and a single footprint is not unlike that of the sheep. Its walking-tracks are represented by No. 3. You will observe that they are but slightly spread. No. 2 represents the tracks of its leaps, and of course the forward ones are made by the hind feet.

The muskrat is more or less active all winter, for it stores no food, but obtains it under the ice. This consists of aquatic plants and their roots. On warm days you may find its tracks beside the open streams. It is not a good walker—some woodsmen maintain that it never walks when traveling. The tracks of its short, slow jump are shown by No. 4.

The skunk during the colder part of winter remains in its den, which is usually a hollow log or an earth burrow. Long before snow disappears, however, you may expect to find its footprints. It sleeps by day and hunts by night. The tracks made when walking are so wide apart that they appear in two rows, as may be seen by looking at No. 5 held level with the eye. This may be because the skunk's legs are short and its body wide. Although this animal has a wabbling canter, it is slow on foot, and seldom attempts to run when in danger. It has a surer means of self-defense. No. 4 shows the tracks of the short, awkward leap.

The mink makes its nest in the banks of streams, in hollow logs, and among rocks. Its feet are partly webbed, and it is an excellent swimmer, capable of catching fish. This animal seems, however, incapable of walking, and when on land or ice proceeds by a series of jumps, often so long that you would say it was fleeing from danger. For each jump it leaves but two tracks. This, no doubt, is the result of raising its fore feet, one at a time, and sliding its hind feet under them, as the leap is finished. No. 6 represents the tracks that it leaves in the snow. The weasel and ermine make similar tracks.

Squirrels during the coldest weather of winter sleep in their nests in hollow trees, and also in those made of leaves in tree-tops. But on warm, sunshiny days they come forth. Therefore it cannot be truly said that they are hibernating animals. Their fore legs are short compared with their hind ones, and the feet on these legs have but four toes, while their hind ones have five. As they pass from tree to tree in the snow they leave their four-cornered groups of tracks; and you may notice that the five-toed feet make the front tracks. They are larger and wider apart than those of the fore feet.

The fox is noted for its long leaps and great speed, being able to overtake and devour rabbits, and to escape danger itself when pursued. When walking it puts one foot nearly ahead of another, thus leaving what approaches a single line of tracks. These tracks much resemble those of the domestic cat, and many a hunter has followed the latter, thinking himself in pursuit of Reynard. No. 14 represents the tracks made in walking, and No. 8 those in running. Of course, in the latter figure the forward or upper tracks are made by the hind feet, for it is from these feet he is able to spring so far.

The racoon's favorite home is a hollow tree near a stream or body of water. This animal hibernates in winter, but long before the snow is off it is dotted and figured by its feet. Its tracks are along the river and in the gorge by the brook, where it goes to hunt for clams, snails, and water-beetles. In fact, it is hungry enough now to eat

Animal Tracks in the Snow

1 Rabbit
Medium speed
Upper tracks hind feet.

2 Deer, Cat, or Dog.
High speed.

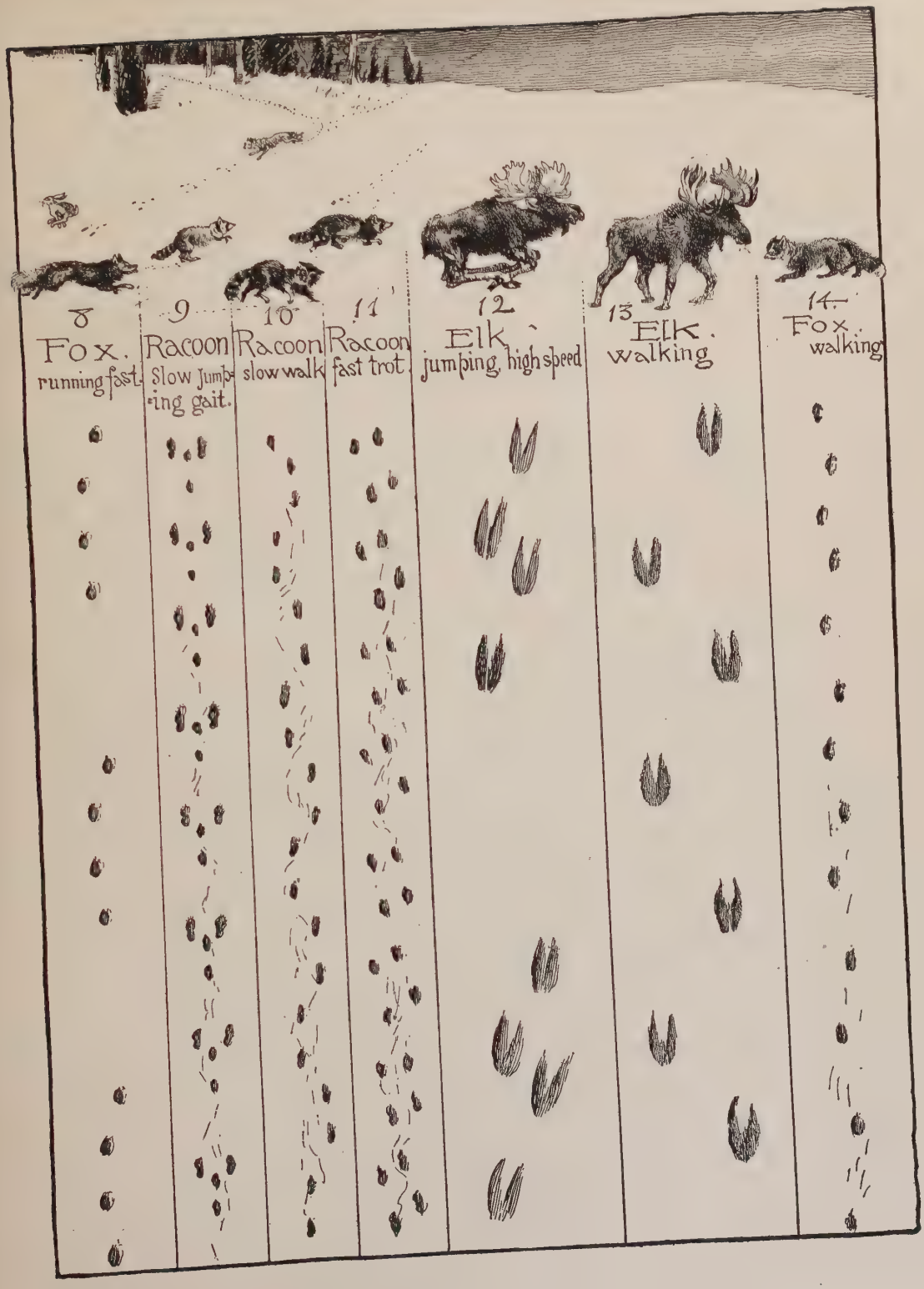
3 Deer Walking

4 Muskrat or Skunk (slow lope)

5 Skunk or Muskrat walking

6 Mink. Weasel. Ermine
Jumping.
2 tracks for 4 feet.
Medium speed

7 Squirrel.
Medium rate.
5 toed hind feet always in front.
See No 1


8
Fox.
running fast.
9
Racoon
Slow jumping gait.
10
Racoon
slow walk
11
Racoon
fast trot
12
Elk.
jumping, high speed
13
Elk.
walking
14.
Fox.
walking

a dead fish or the bits of the partridge that the owl has left. Its hind feet are shaped much like the feet of a child, but they have long toes. The tracks of these long, wide-spreading toes will not be likely to be distinct in the snow, but in the mud they show plainly. It is not a fast runner, and its lope is somewhat logy. No. 9 represents the footprints of its leap at a low rate of speed; No. 10, a slow hunting-walk; and No. 11, a trot.

The elk, though much smaller and slimmer than a domestic cow, has feet much like hers. Indeed, they are so large that its walking-tracks (No. 13) might be mistaken for those of the tame animal. The elk, however, is capable of long leaps. I have known one to clear twelve feet when hard pressed. No. 12 are typical tracks, but the elk is more apt than the deer to vary from the type. When jumping a stream or object that requires unusual effort, the elk places its feet as the rabbit does (see No. 1).

THE WOODCHUCK

BY SILAS A. LOTTRIDGE

The woodchuck is well known among the farmer boys and girls throughout the Middle and Eastern States, for he is as much a part of the farm as the brook or the orchard.

In form he is far from graceful, especially in the latter part of the summer, when the body becomes very fat and pouchy. The color of the fur varies from a reddish brown to a grizzled gray, or, occasionally, black. The teeth, like those of the squirrel and prairie-dog, are strong and well adapted for cutting.

His summer home is sometimes in a burrow, and sometimes in a wall or stone-heap. The woodchuck of the present day is rather inclined to desert the old home in the woods, where he fed upon tender bark and roots of various kinds, and become a dweller near the clover-patch in the field. For this reason he has become a special object of persecution by the farmers, and a continual warfare is waged against him from early spring until fall; some are trapped, many are shot, and not a few are destroyed by the farm dogs.

The trap is set at the entrance of the burrow, being made fast to a stake which is driven into the ground. The woodchucks are more easily trapped in May or June than later in the season. Old ones frequently become very shy, especially those living in meadows remote from the house and having their burrows in the edge of the woods or bushes near by. Sometimes one of these woodchucks will spring a trap day after day without being caught; or even dig around the trap, much to the disgust of the farmer-boy, who is usually paid a bounty of ten cents for each "chuck" caught. Occasionally the farm dog develops considerable ability in capturing them.

ON THE LOOKOUT.

There is no animal that exerts less energy in the course of a year than the woodchuck. He feeds upon the best in the meadow and occasionally in the garden, being very fond of the juicy peas and beans and tender lettuce. Then as winter comes on he forgets all care and worry, crawls into his burrow, and, like the bear, falls asleep, not to awaken till spring.

The cubs usually number four or five, and the date of their birth

is not far from the tenth of May. The snug little chamber in which they are born is located two or three feet under the ground and contains a small bed of dry grass gathered the fall before.

The woodchuck family best known to me was the one that lived by the old rail fence just back of the orchard on my father's farm. The mother introduced herself one morning in the latter part of May, just as old Rover and I had started out for a day's fishing. As she fled at our approach, Rover followed and disclosed to me the burrow into which she had fled.

A FAVORITE "ROOST."

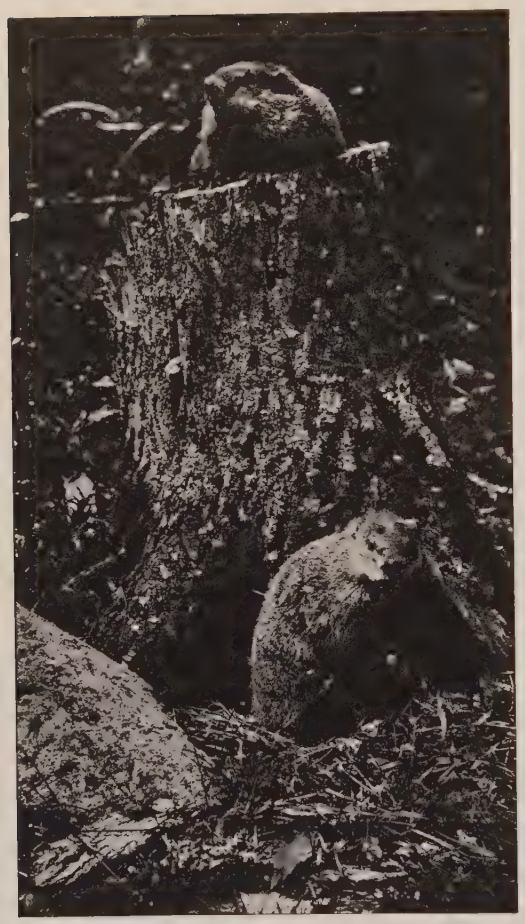
More than one day's sport I got out of that burrow. I took care that Rover did n't go with me when I made my visits, and, instead of digging out the inmates boy-fashion, I waited for them to come out of their own accord. Several times the old woodchuck appeared; but, feeling sure that there were "more to follow," I patiently watched and waited. Finally my patience was rewarded, for, one fine morning, five little cubs came tumbling along the narrow passage after their mother to the entrance of the burrow and looked with their great, beautiful brown eyes upon the outside world. What a marvelous surprise it must have been to them to view the green grass and the beautiful flowers!

When satisfied that there was no danger lurking in the immediate vicinity, the mother led the way into the grass, followed by the cubs, which tumbled along in haste to keep close to her. They tried to imitate her in everything; and when she nibbled a clover-leaf they followed her example, and soon the sharp little teeth had learned to cut the juicy leaves.

The real object of their first outing was soon accomplished—that of filling their stomachs; and then they began playing about in the grass, very much like puppies, but the mother was careful not to let them wander far from the entrance of their home, for if her trained ear caught the sound of something approaching, she would hustle the little ones into the burrow. Once the cubs had traveled only a part of the passage before they heard the deep breathing of the dog at the mouth of the tunnel. The exertion and excitement must have made their little hearts beat fast, and for the first time in their lives they learned what it was to be frightened.

This was only the beginning of their education; for day after day they came out of the burrow, and when they scrambled back something had been added to their little stock of woodchuck knowledge. A part of this knowledge was obtained by copying their mother, but by far the greater part came through instinct and experiences of their own.

Some attention was given to the art of climbing trees and fences, for from elevated positions they could command a much more extended view of meadow and woodland. Yes, woodchucks really climb fences and small trees, though their first attempts are very clumsy. Never a day



INTERESTED, BUT NOT AFRAID.

passed that the little woodchucks did not receive a lesson in danger-signals. They soon learned to distinguish among the many sounds that came to their ears those that threatened harm from those that meant no harm at all. They learned that a dog is not a dangerous foe, as his presence is usually made known while he is some distance off; but they learned to be very wary when a fox was in the vicinity.

I once knew a dog, however, that was a famous woodchuck-hunter. After locating a woodchuck, Shep would watch his movements for a little time; then, while the woodchuck was feeding, he would move directly toward it, keeping his body close to the ground, but would stop instantly and lie very still whenever the woodchuck raised itself on its haunches to look about for danger. When Shep believed himself to be near enough to the entrance of the burrow, he would make a dash for it, and if he reached it first, there was sure to be one less woodchuck to feed upon the clover.

When the early autumn came, the little cubs were pretty nearly grown up; and soon they settled down to the serious business of life, either finding a deserted burrow or digging one for themselves. Within a space of three days the old burrow had but one occupant, the mother.

Usually each woodchuck has a burrow by itself, but occasionally a pair will live together through the winter. I came upon such a pair, not far from the summer home which had so interested me, and I pleased myself by imagining they were two of my old friends. The spot they had selected for their burrow was on a gentle sunny slope in one corner of the meadow. They had evidently been working little by little on the new burrow before they left the old one, but now they made a regular business of it, and worked with a will. They made rapid progress, for the feet are armed with powerful claws and there is a web between the toes, a combination which makes an excellent pick and shovel. The fore feet are used principally for digging, and the hind ones for

DANGER IN THE DISTANCE.

HIS WINTER NAP.

Showing a woodchuck hibernating. The ground has been cut away, disclosing the interior of the burrow without disturbing the animal.

throwing backward the loosened earth and stones.

For some distance from the entrance their burrow inclined downward quite sharply, and then turned slightly upward and continued along beneath the surface for a distance of fifteen feet. There was a small side tunnel, four feet long, which ended in an exit; the main burrow ended in a chamber of considerable size, in which there was a quantity of fine grass for bedding.

When the woodchucks had completed their home they had nothing to do but to eat and doze about in the sun. With a few weeks of this sort of life there came a wonderful change in their appearance; their cheeks were distended, their fur was glossy, and their skins were stretched with fatness.

When September was well advanced they could eat no more, and had only to wait and doze away the time until about the first week in October, when Mother Nature would send them to sleep for the winter. The blood began to flow more slowly through their veins, a drowsiness which they could not resist gradually crept over them, and finally they curled themselves into balls of fur, side by side in their snug retreat, and fell asleep.

Warm autumn days followed with their mellow light; Indian summer came and went, but the slumber of the woodchucks was unbroken.

A PAIR OF HIBERNATING WOODCHUCKS.

Showing another burrow, opened as was that shown in the upper picture.

DAUNTLESS.

DAUNTLESS: MY BIG TIMBER-WOLF

BY ERNEST HAROLD BAYNES

"Look out there, sir! That big timber-wolf in the last cage is a fiend; if you put your hand within reach he 'll have your fingers off before you know it. When a wolf in the next cage stuck his paw through the bars, that fellow started a scrimmage that gave us all trouble."

I was standing in front of the wolf dens in one of our big zoölogical parks, and the above remarks were addressed to me by a keeper. My interest was increased at once, and I stepped back to get a better look at the occupant of the "last cage." He was a large, powerful brute, with a wonderfully handsome head, albeit on one side there was a long, red scar, the result, as I afterward learned, of a recent desperate fight. The expression on his singularly strong face was not a bad one; in fact, it might have been called "good-natured" had it not been for the coldness of his eyes. The latter were distinctly the eyes of a wild thing, and it was apparent that without special effort, they were taking in everything which went on around them. A wolf in the next cage, the movements of the keeper, my own change of position, a man walking in the distance, a bird passing overhead—all these things, and many more, those strange eyes took note of, and had their owner been free, doubtless he would have made trouble for everybody within reach.

Presently the wolf in the next cage rose to his feet, yawned and stretched himself. The big fellow became restless at once, and paced up and down, whining with the eager impatience of a dog which sees an old enemy but is restrained from grappling with him; a sort of "Just-let-me-get-at-him" whine.

The wolf in the pen alongside now came up close to the dividing bars, and the instant change which came over our big friend was marvelous to behold. He was a very large wolf before, but now, with his head held high above his shoulders, and with the long hair of his neck and back standing on end, he looked gigantic. Of course, he could not get at the other fellow, but the bars alone were to blame for this.

There was a murderous look in his eyes, and his lips curled back from his half-open jaws, dis-

playing his long white fangs, and I marveled at the great activity displayed again and again, as the brute flung his huge bulk at the bars in his desperate eagerness for battle. He was the picture of ferocious strength.

"That," said the keeper, with a jerk of his thumb, and with something between a smile and a

THE TIMBER-WOLF PUPPIES ON THEIR ARRIVAL IN NEW HAMPSHIRE.

sneer, "is the father of those cubs you 've come for; and if they take after *him,* you need n't doubt that they 'll be genuine wolves."

It was a fact that I had come for a litter of wolf puppies, and now I went off to see them. There were four of them, and we found them curled up in the corner of a separate pen—apparently just a single bunch of gray fur. Their mother was with them, but showed no disposition to fight—only watched us anxiously as we looked her infants over.

I had just finished my inspection, and was slipping my note-book into my pocket, when a well-known naturalist strolled up and asked how I happened to be there. I pointed to the wolf puppies and told him what I intended to do. First he smiled, then he frowned and shook his head with the remark: "Better let them alone; they 'll soon prove a great burden to you."

"How so?" I asked.

"Why, they 'll not only kill your neighbors' sheep and cattle, but if the neighbors happen to have any children—What are you laughing at? You won't find the subject half as funny when you see a mob of farmers at your front door, armed with scythes and pitchforks, waiting to settle for the damage your wolves have done." And off he went, feeling rather piqued, I fancy, because I did not take his advice and leave the wolves alone.

The babies were put into a box, and after a railway journey of some hundreds of miles, I at last got them home safely, but not before I had had numerous adventures.

The first sign that the young wolves took notice of anything beyond the milk which had been their sole food, was given at the hotel as we passed through Boston. I let them out in my room for a little exercise, and at once they crawled away hugging the wall, to the darkest places they could find. They were stolid, serious-looking youngsters, and gave every indication of wishing to be left to themselves. Otherwise, they might easily have been mistaken for puppy-dogs of some kind, though a certain wolfish look about the ears would have made a close observer suspicious of them.

The young timber-wolves did not take at all kindly to a baby's bottle, and but very little better to a medicine dropper, by means of which I fed them on the homeward journey. After that I gave them milk in a saucer, and they surprised me by the readiness with which they learned to lap it. But it was a very short time before they showed that a milk diet would not answer their requirements indefinitely. After taking a few laps, they would leave the rest, and come toddling up to me, whining, as if they were looking for something else. I tried them with a large piece of raw beef, and they showed at once I had "guessed right the very first time," as the song says. And their natures changed as suddenly as

A TIMBER-WOLF CUB HOWLING.

their diet; one moment they were innocent, toddling, blue-eyed infants—the next they were wild beasts, their savage nature on top in an instant.

Even at this tender age, there was a marked difference in the characters of the young wolves. Two of them were much more courageous than the others, and when there was a battle for the

possession of any particular piece of meat, one or other of this pair was sure to come off victorious. Neither of these had any fear of me, though the other two avoided me whenever possible, skulking under chairs and tables, and making it difficult for me to become acquainted with them.

These wolf cubs were not nearly as playful as the fox cubs which have from time to time come under my observation. They squabbled and pulled one another about sometimes, but never gave themselves up to the fun of romping as the foxes used to do. At odd times, however, they would venture to come and play with me, tugging at the bottoms of my trousers, or chewing my shoelaces, and if at such times I threw them the end

DEATH AND DAUNTLESS HUNTING TOGETHER AT THE AGE OF FOUR MONTHS.

of a string, one of them would pick it up in his teeth and play tug-of-war with me. They could use their voices in many ways, including a very fetching little bark; quite a variety of whines, growls, and snarls, and if I imitated the howling of a wolf, they would raise their little muzzles in the air, and sing in concert a prolonged and deep-toned "Oo-o-o-o-o-o-o-o-o-o," some of the members of the quartet occasionally varying the performance by giving rather high, staccato yelps, while the others carried the melody, so to speak.

I think I never saw any animals with such ravenous appetites as those four young wolves, and for the first time I fully appreciated the meaning of the saying "As hungry as a wolf." They wanted raw meat, and they wanted lots of it, and I let them have it, in spite of the warning by my well-meaning friends, that it would "make them dreadfully savage." They grew very fast, and as they gained in weight and power, their fights for possession of the greatest share of the food became more and more serious.

A little later, the bolder ones would not confine their fighting to meal-times, but would scarcely tolerate the presence of the weaker ones at any time, and fought them savagely whenever they came near. So, recognizing Nature's law of the survival of the fittest, I had the two which were leading a miserable existence humanely disposed of, and kept the two which were all wolf. One, because of his dark color and peculiarly forbidding look, we named "Death," and the other, the larger of the two, we named "Dauntless," because he had always been the boldest of the lot. These two were great friends, and never fought over anything, though at meal-times they often growled a mutual warning to respect one another's rights. They romped and played a great deal, were perfectly happy when together, but seemed greatly distressed whenever they were separated. They were entirely friendly with me, and allowed me to handle them with some freedom, except when they were feeding, and because they were now able to do a serious injury, I seldom attempted to caress them at meal-times.

Sometimes I took the two young wolves for a walk with me in the forest, and it was most interesting to see them working together through the woods and across clearings, or splashing along the trout brooks in a cloud of spray. They were creatures of seemingly tireless energy, galloping along for hours at a stretch, their long tongues lolling from their mouths. Now and then they would start a rabbit from beneath the low-growing spruce branches where he had been sitting, and often they would send a red squirrel scurrying up a tree in a panic of fright, and then watch him apparently in amazement, as he sat on a branch over their heads, chattering remarks, that sounded as if Master Redskin were almost bursting with indignation and defiance. Sometimes they would scratch for mice under fallen logs, or in the long grass, and rather rarely their efforts were rewarded by finding a nest of the little rodents, which were quickly despatched. Once or twice they destroyed birds' nests which had been built on the ground, and once they caught a full-grown wounded robin. Their eyes were wonderfully quick to notice any movement of bird or beast in the landscape about them, and if it were but a butterfly, their jaws were quick to snap at it.

If there was anything the young wolves en-

joyed better than a walk with me, it was to be allowed to pay a visit to "Romulus," the coyote, who had been deprived of liberty since his last and biggest offense against the property of my nearest neighbors. He is now on a long chain, the last link of which runs upon a wire stretched across the orchard, giving him a range of a hundred feet or more. Here I would sometimes take the two young timber-wolves, and it would be hard to say whether the host or his visitors were most delighted. They would all wag their tails and whine affectionately, the prairie-wolf racing from end to end of his long wire, with Death and Dauntless in hot pursuit. Then Romulus would stand quite still, shut his eyes, and allow the timber-wolves to lick his face and chew his ears. And sometimes I would take part in the game myself, by tossing sticks and apples for the wolves to race after. But after a frolic of this kind, the youngsters were always wilder than ever, and in order to catch them it was often necessary to use both patience and strategy.

After the wolves were two thirds grown, I never dared to turn them loose to roam at their own sweet will, for two wild animals which make a practice of putting their teeth through a galvanized iron pail by way of amusement, and which are powerful enough to kill an ox, are not safe unless under complete control. So I had two pens made for them: one indoors, which they occupied at night and in very bad weather, and the other outdoors, to romp in during the daytime. To an assistant fell the sometimes strenuous task of transferring them from one to the other, night and morning, and to his credit, be it said that he seldom had a mishap. One day, however, he was off in the woods until nightfall, and while attempting to handle the wolves in the dark, they got away from him. He called them in his most endearing tones, and several times they came so close to him that he could touch the tips of their noses as they crouched before him, their fore paws extended on the ground, and a mischievous look in their eyes; but the moment he tried to advance his hand even an inch toward the back of the neck of either one, that one would "give him the Merry Ha-Ha!" as the man said, by instantly leaping out of reach, and bounding away in derision. Then I tried my hand with no better success; the little imps seemed to thoroughly understand their advantage, and were determined to hold it. This was at about eight o'clock, and, of course, it was out of the question to think of leaving them free all night, for no one could tell what damage they might do before morning. So there was little for it but watch and wait, and, in truth, there was more waiting than watching, for after they had had their first bit of fun with us, it was only occasionally that the gray brothers condescended to come within the circle of light shed by our lantern. I knew that

DAUNTLESS CATCHES A WOODCHUCK.

one of the things they would do, would be to pay a visit to Romulus, so to the orchard we went, and found the runaways already on the ground. I called the coyote to me, in the hope that his cousins would follow close enough to permit me to catch them; but not a bit of it: they had been caught this way before, and after coming just so far, sat on their haunches a little out of reach, and waited for their companion to come back to them. But I held on to him by his collar, and presently,

HE DINES ON THE WOODCHUCK.

as though tired of waiting, they scampered away across the fields, and of course we had to follow, vainly endeavoring to keep them in sight. They soon disappeared over a stone wall which skirted a road, but finding their footprints in the mud,

DAUNTLESS AND HIS MASTER.

we followed with confidence. We had nearly reached a farmhouse, when a fearful commotion among the pigs caused us to quicken our pace. The sty was in one corner of the barn-yard, and from it came a perfect storm of excited grunts and squeals. My assistant was a little in advance with the lantern, and as he neared the pigsty I could see strange shadows moving fast upon the farther wall. Looking over into the sty I saw a queer sight. There was lots of fun going on, but the wolves were having it all. Dauntless was chasing five or six pigs round and round, at a pace much faster than they would ever have traveled for their health, while Death sat on his haunches and expectantly licked his chops. Dauntless was just about to make the close acquaintance of one of the porkers, when I jumped into the pen and stopped the game. But I could not catch the wolves, who sailed over the farther wall, and were off in the direction of the hen-yard. On the way they accidentally ran through a flock of sleeping ducks, which scattered to the four winds of night, with all the ado that a flock of excited ducks can set up.

The wolves were seeking for some opening into the hen-yard, when the farmer and his two sons joined the hunt, and it was then that I learned how near I had come to getting shot. From one part of the farm to another, we chased those precious wolves, until some of us began to be tired and to appreciate the fact that a wolf has more endurance than a man has. At last an idea occurred to me. Telling the others to hide near by, I went into the barn, and leaving the door partly open, I groped my way to the farthest corner; then I took a long breath and sent up my best imitation of the deep-chested, long-drawn howl of a timber-wolf. A moment's pause, and then there

ANOTHER VIEW OF THE TWO FRIENDS.

came an answering call with a short bark at the end of it. Then I heard a whining, and something dark appeared at the open door. Again I gave the wolf call; there was a pattering of feet on hay, the slamming of a door, and the wolves were prisoners once more.

Out of consideration for my neighbors, I decided to keep but one timber-wolf thereafter, so I disposed of Death. Dauntless was very lonesome for a time, and at night he howled long and mournfully. The howl of the coyote comes from the mouth, and will ofttimes make you smile, but the howl of a timber-wolf comes from deep down—it is a half-human cry which makes you thoughtful and sad. So I went to this lonely wolf when he called, and tried to cheer him up, but at first he would have little to do with me. He took his food and ate it sullenly, but if I attempted to approach, he would retire to the farthest corner of his pen. So I let him alone, but visited him often, and simply sat down to keep him company. About a week after I had begun to make him regular visits, I entered his pen, and thought I detected the suggestion of pleasure on his face. I put out my hand, but he shied off, and I sat down to watch him. In a far corner of the pen he lay on the ground with his big head between his fore paws, and through his half-closed eyes he watched me in silence. Presently he arose, looked at me steadily, walked slowly forward, touched the back of my hand with his cold, wet nose, and retreated. Another long look, another advance, and he thrust out his muzzle and licked my face. I sat absolutely still, knowing that to startle him now might spoil some most interesting observation, but all he did was to reach forward and take my cheek very gently in his front teeth, and begin to pull in a half-questioning way, as though to see how I would take it. Much as I hated to disturb him, I felt that it was certainly my turn to move, so I put out my hand quietly and he let go at once; but it was evident that a change had come over him, for, instead of running away, he crouched before me in a playful attitude, as though challenging me to a romp with him. I accepted, and we had strenuous fun, dodging and twisting and jumping over one another until one of us had had all he could stand of it. Naturally, that one was not Dauntless, and the big wolf, no longer sullen, but with a face full of mischief, tugged at my clothing, apparently in an effort to drag me into the game again.

Since that day Dauntless and I have understood one another pretty well, and we have had many happy hours together.

I did try taking him for long tramps, unhampered by collar or chain, and he was good until something living crossed his path, and then he was a wild timber-wolf, and a whirlwind would have obeyed me about as well. One day the live thing was a large dog, and before I could interfere the wolf fairly hurled himself upon it. The dog was simply knocked head over heels, and it was necessary to move with more speed than discretion in order to save him. The wolf did not attempt to bite me, but he struggled with me desperately in his efforts to go in and finish his work. To add to the excitement I lost my footing in the scuffle, and fell to the ground, and, during the next few minutes, my friend and I tore up the buttercups and daisies over several yards of roadside. As for the dog, he needed no instructions; and with but three legs in commission, the time he made in the direction of the horizon was remarkable. If he ever comes back—but he won't.

Only once after this did Dauntless have an opportunity to prove that freedom for him meant death for others. We were walking over some wild mountainous country, when a two-point buck crossed our path, and at the first glimpse of him, the gray wolf launched himself. The deer snorted, wheeled and sprang away, and at first opened up a gap between himself and his pursuer. I called to the wolf, but I might as well have ordered the waters of Niagara to go back into Lake Erie. The chase was out of my sight in a moment, but I followed as fast as possible, hoping against hope that somehow I might save the deer. When I caught up to them, the buck was dead, and the wolf looked up at me, smiling, wagging his tail, and licking his jaws.

Now, when Dauntless goes walking with me, he goes on a chain—a chain which is a compliment to his strength. At other times he lives in the orchard near the prairie-wolf, and, like Romulus, can run the length of a long wire, stretched between two distant trees. So the only creatures he can war upon are those which are rash enough to come within the boundaries of his limited range, and as these are chiefly woodchucks, my neighbors find no fault.

Last winter I was lecturing on wild animals in the big Auditorium at Concord, New Hampshire, and at the close of the talk, I told the audience that I had one more picture to show them. As the lights were turned up, a gigantic timber-wolf stalked onto the stage beside me, arose until his big paws rested lightly on my shoulder, and looked across that sea of faces with a strangely calm expression which many translated to mean, "You touch him if you dare." It was Dauntless.

THE KIND-HEARTED BEAR

(Translated from the Russian of Vera P. Zhelikhóvsky)

BY ISABEL F. HAPGOOD

This remarkable incident happened in the year 1847, in the Trans-Caucasian German colony of Elizabeththal, about thirty miles from Tiflis.

In that region, bears and all sorts of wild beasts are still to be found in abundance, but fifty years ago it was a perfect paradise for sportsmen; hence unarmed admirers of nature were sometimes alarmed by unexpected encounters. It was regarded as an ordinary, everyday occurrence to run across a bear, especially at the season when berries, fruits, and grapes were ripe in gardens and forests. All inhabitants, even the summer residents in the villas, who had come for refreshment to the villages, colonies and military settlements in the vicinity of the capital of Georgia (which was deserted from June to September), knew this very well, and did not run the risk of going unarmed to work or on pleasure parties. It is well known that even women and children, in that region and in those days, understood how to handle daggers and firearms.

But it sometimes happened that weapons, even firearms—which were far from having the long range which they now possess—proved unavailing, powerless to save the victims.

This is an account of an original scene, exactly like a fairy-tale, which was enacted, once upon a time, in the outskirts of the Elizabeththal colony, before the eyes of a number of people who were riding to the forest on a picnic, and a party of the colonists, who were returning from their work. The colonists were descending from the opposite mountains, and the horsemen were riding along the bottom of the ravine-like valley on the bank of a turbulent mountain stream. On the right hand, where lay the planted fields, grew bushes and small trees; but on the left bank of the stream rose the barren cliffs, which became more steep and perpendicular as they increased in height. At their summit, just below their last, jagged crest, which seemed inaccessible and rose in peaks, like the walls of a fortress, a mountain path descended. It wound like a narrow ribbon around a vast crag which thrust forward its granite bosom. The inhabitants had broken it through the thickets for the purpose of communicating with the mountain villages. In some places this foot-path was a fathom wide; but just at that point, on the cliff, it had been hard to blast it out with powder, and it was so narrow that it was difficult, not only for mules but even for tiny donkeys and people, when they met upon it, to pass each other. Even pedestrians generally halted behind the projecting crag, and did not enter upon that strip until they had shouted vigorously, thereby giving notice to any one who might chance to be on the other side, so that they might not meet at dangerous and impassable points.

On both sides of the cliffs, springing from the rifts, clinging and intertwining, from summit to base, grew a mantle of barberry, raspberry, and thorny blackberry bushes of that region, with their rich clusters of fruit, which at a distance looked more like grapes, and near by more like huge mulberries, than like the squat, bluish, sour berry which is called a blackberry in Russia.

The children—little Tartars from the mountain villages and little Germans from the colony—in company with the goats, had broken many a path along the steeps of the clefts nearest to the exit from the gorge; but they rarely peeped farther into it, because they were afraid of wild beasts. There was no making one's way through the wild game there.

The little path ran to the left; on the right, along the mountains, the forest began, in a thick mass, cut by such deep ravines, by such crevices and jagged ridges of rocks, that the foot of man probably had never trodden them at all; certainly not in the days of which we are speaking.

From these forest-clothed vales crept unbidden guests in search of fruits and, sometimes, of living food—wolves, bears, jackals, wildcats, even hyenas, who had come from Persia or Anatolia.

When the villa residents of those days, who lived in the colonies or in the regimental headquarters, set out upon an expedition to the forest, they always sent men on ahead to clear the way. The noise of the cavalcade, the firing of the escort, frightened away the denizens of the forest, and thus rendered the place safe for the members of privileged society. Never were picnics and riding-parties in such vogue, half a century ago, as in the Caucasus and in Georgia; but people rarely ventured upon them without these preliminary precautions; so that the little company which had, in the present instance, assembled for a picnic, appointed at a spot two or three

versts * from Elizabeththal, had not the slightest expectation of encountering a wild beast. All at once, one of the ladies, on raising her eyes to the summit of the cliff which we have described, on the opposite side of the rushing river, uttered an exclamation, and drawing rein, called general attention by pointing with her whip. Men and women all halted, and gazed in silence to the spot aloft which she indicated.

There, on the narrow path which has been mentioned, with slow and stately tread, swaying his dark, heavy body about on all four feet, a huge bear was wending his way.

Apparently "Mishenka" † was either sad or was thoughtfully considering some difficult problem, or simply had overloaded his stomach by eating his fill of herbs and grasses which at that season of the year were abundant—red, green, and yellow. Like a tortoise, he barely moved; his muzzle was hanging close to the ground, and swinging lazily, as though he were burdened with its weight.

For several minutes the interested spectators watched in silence the unusual sight of a bear on a leisurely ramble, and then all began to talk at once. Some were sorry that they were so far away—no bullet would reach the peak from such a distance; others propounded divers theories as to whence he had come and whither he was bound; others, still, had already concocted a plan for a future hunt, coveting poor "General Toptygin," ‡ who calmly continued his stroll, neither hearing nor seeing his sworn enemies, and not suspecting their evil designs against his person. At the moment he was, evidently, in the most blissful state of mind, cherishing no evil thought against any one, peaceably digesting the forest fruits and berries, and perhaps, also, the juicy products of the colonists' vineyards, to which he had, plainly, been treating himself.

With a laugh, one of the riding-party made the suggestion, in the hearing of all, that "it would be a good thing to hit his Waggleship with a bullet."

"You can't reach him from here with any gun," objected another.

"Nevertheless, we might try," suggested the ladies.

"Of course, we might try! Perhaps he would quicken his pace."

"At least, let us knock the arrogance out of him! Hurry him up! Let 's see how he 'll run! That would be fun!"

"What fun it will be! You 're bold enough at a distance; but what if we were riding on that side of the river? It 's not pleasant to meet such fellows."

"And on such a path, to boot—where there 's no getting out of the way. You would either have to leap into the abyss head foremost, or fall victim to the teeth and claws of that beast!" all exclaimed, excited by a spectacle which was not on the program of amusements for their picnic.

"Well, after all, why not? Mikháil Ivan'itch will not feel our shot, but he 'll hear it. It will startle him, and we shall see the result," said one military man decisively, to the satisfaction of the ladies.

And, turning to a kazak of the escort, he gave the order:

"Come now, brother, try to hit that lazy, shaggy fellow; fire a shot!"

In an instant the kazak had unslung the gun from his shoulder and was taking aim, when suddenly, from behind the riders, a restrained but authoritative shout rang out from the midst of a group of Germans who were descending on the other side of the gorge, and whom they had not, up to this moment, perceived.

"Don't fire, gentlemen!" the voice cried in German. "Stop! Don't fire!"

"What 's the matter? Why not fire?" all exclaimed, addressing the colonists, after ordering the kazak not to fire just yet, and comprehending that there must be some reason for such a command.

All four of the Germans, who were walking with their pitchforks and rakes on their shoulders, halted two or three fathoms higher up than the riders, and all, except the man who had hailed them, and who hastily approached them, stared intently upward, with an expression of dumb terror on their faces.

"What terrible thing do they see yonder?" was the general thought of both the men and women. And they, also, raised their eyes aloft.

The bear was still proceeding along the path with his former rolling gait. That was all they could see.

Meanwhile, the German who had stopped the shot had come up with the colonel who had given the order to fire, brought him to a halt, and hastily explained something to him. The roar of the river prevented their all hearing distinctly what the matter was, but those nearest groaned, and immediately, in affright, communicated the news to the rest.

"He says that they have descried up yonder

*A verst is nearly two thirds of a mile. †"Mickey." The Russians call a bear *Mikháil*, diminutive, *Misha*, or *Míshenka*, which is still more diminutive, adding (as will be presently seen) either *Ivánovitch*, the son of John, or *Potápovitch*, the son of Potap.—I. F. H. ‡"General Trampler" is as near a translation as can be given for the title of Bruin.—I. F. H.

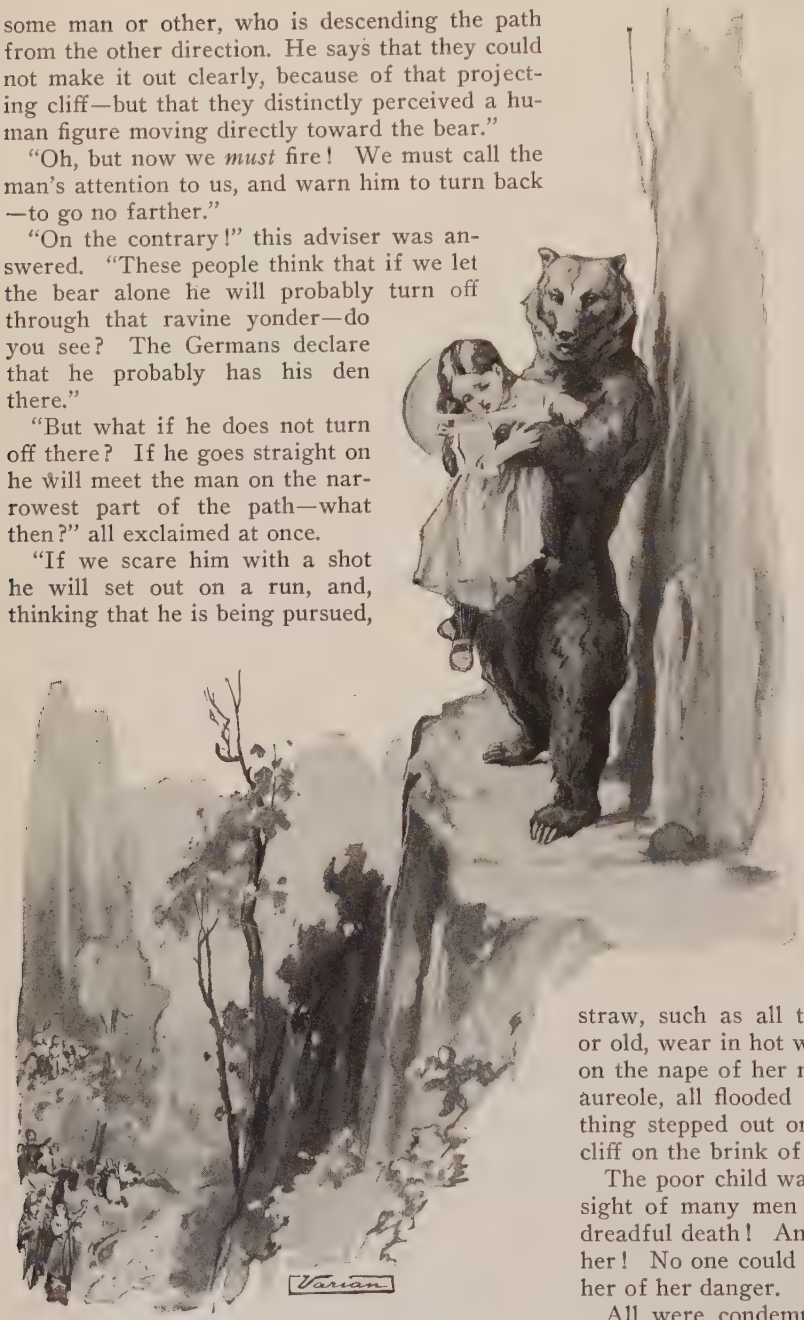
some man or other, who is descending the path from the other direction. He says that they could not make it out clearly, because of that projecting cliff—but that they distinctly perceived a human figure moving directly toward the bear."

"Oh, but now we *must* fire! We must call the man's attention to us, and warn him to turn back—to go no farther."

"On the contrary!" this adviser was answered. "These people think that if we let the bear alone he will probably turn off through that ravine yonder—do you see? The Germans declare that he probably has his den there."

"But what if he does not turn off there? If he goes straight on he will meet the man on the narrowest part of the path—what then?" all exclaimed at once.

"If we scare him with a shot he will set out on a run, and, thinking that he is being pursued,



"THE KIND-HEARTED BEAR LIFTED THE LITTLE GIRL UP CAREFULLY AND, TURNING, SET HER DOWN ON THE OTHER SIDE OF THE PATH."

he will pass his den. In that case they will meet."

"Oh, what a terrible situation! And there is no way to help!"

"Perhaps these Swabians have already devised some method. They seem to have an idea."

"Look, look! Those up above are pointing!"

In fact, the colonists who had remained above, and who were able to see farther along the mountain path than was possible from the bottom of the gorge, suddenly began to move frantically, to talk together in haste, pointing out something to each other, and exhibiting plain evidences of being overwhelmed with terror and excitement.

All the members of the riding-party, also seized with involuntary terror, kept their eyes steadfastly fixed on the cliff, in expectation of what was coming. What horrible sight were they about to see?

And all at once a simultaneous cry of pity, terror, horror, broke from all. From behind the crag a little girl made her appearance. The tiny colonist was seven or eight years old; not more. She was strolling along with her arms crossed carelessly on her pink apron. A large hat of coarse straw, such as all the colonists, whether young or old, wear in hot weather, had fallen quite over on the nape of her neck; and surrounded by this aureole, all flooded with sunlight, the poor little thing stepped out on the path which skirted the cliff on the brink of the abyss.

The poor child was going to her death in plain sight of many men and women—and to what a dreadful death! And not one of them could help her! No one could either save her or even warn her of her danger.

All were condemned to gaze, inactive, at the dreadful event which was on the point of happening before their eyes.

The women raised a cry, and fell to weeping. The majority of them sobbed themselves into hysterics beforehand. The men, even those who had been in battle more than once, who had beheld death and blood, said afterward that they became cold and dizzy, and many turned away

their eyes in anguish. But those who endured the ordeal, on the other hand, beheld a marvel.

Because of the turn in the path, the child could not see the terrible fellow-traveler who was coming to meet her. She only caught sight of that dark-brown shaggy mass at the moment when it almost came in contact with her. The huge beast completely blocked her road. His left paws stood on the very edge of the path, while with his right side he almost rubbed the cliff. They caught sight of each other almost at the same moment.

Probably a cry or an exclamation on the part of the child revealed her presence to the beast, as he was walking along with his muzzle and eyes drooped earthward. They stared fixedly at each other. The little girl was petrified with fear; the bear halted in indecision, no doubt much astonished if not frightened. For one moment, probably, he reflected: "What am I to do now?" It was impossible to pass without crushing the unexpected obstacle, without striking it or hurling it into the abyss. The path was so narrow at this point that he could not even turn round on all fours. What was to be done?

Down below, the people waited with bated breath, expecting at any moment to see the unhappy child pushed into the abyss. But evidently that was not the way in which full-fed and therefore good-natured "Mikháil Ivan'itch, General Toptygin," had settled the problem. He wished neither death nor harm to this tiny creature, helpless before him, with open mouth and staring eyes, having lost through fear all power of crying, and awaiting his will in trembling silence. And "Míshenka" carried out his will.

With a faint growl, caused not by anger but by the necessity of putting himself to trouble, he reared up on his hind legs, strode close up to the little girl, and, bracing his back against the cliff, clasped his fore paws round her, just beneath the shoulders.

Shrieks and groans of despair resounded from below. The ladies, who still continued to gaze with dim eyes, grew faint; but the men, especially the huntsmen, who were acquainted with the murderous habits of the bear family, leaped in spirit, and with a hope—a mad hope—for the child's safety. They perceived that "Míshenka" was behaving in a very remarkable manner, with all the caution and dexterity which he could command.

They were not mistaken as to his unprecedented goodness. The kind-hearted bear lifted the little girl up, carefully bore her over the precipice, and, turning on the pivot of his hind paws, set her down on the other side of the path.

Having performed this gymnastic exercise, the bear, without waiting to be thanked (evidently he was well acquainted with the human race), whirled about, dropped on all fours, and proceeded quietly on his way, swaying from side to side, and grunting contentedly in anticipation of sweet repose in his lair not far away.

The colonists hastened to the spot, and found the little German child safe and sound, but greatly frightened by the bit of a waltz with such an unusual partner. But I must confess, to the shame of the men, that the virtuous bear was not in error as to his bad opinion of us. I know not whether he slept sweetly after his humane act, but I do know for a fact that it was his last night in this transient vale of ingratitude and evil. On the following morning a hunting-party set out after him, and a month later his magnificent skin lay in Tiflis, in the private study of one of the witnesses to this miraculous scene.

NOTE.— Madame Zhelikhóvsky lived for years in Tiflis and the Caucasus. She probably heard this story from one of the spectators.—I. F. H.

IN THE JUNGLE. FROM A PAINTING BY CHARLES R. KNIGHT.

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